Issue 163
PS
1966 Series
THE PREVENTIVE MAINTENANCE MONTHLY
OKAY! NOW THAT YOU'VE SCORED 100% ON THE SKIN, LET'S TAKE A LOOK AT THE INSIDE.
CMMI
Will Eisner
SPECIAL FEATURE
YOUR M60 TANK PART
PAGES 2-17

Memos to Connie —
ITEM — Operators have got to be trained in all operator maintenance BEFORE trying to operate equipment!! HM
ITEM — Tell the guys about making sure those power generators get good OPERATOR maintenance — so they can power the commo equipment! No power and the CO can't communicate... Real Bad!! HM
Dear Connie — Just got back from a visit to Troop units in the Pacific and European Areas. Man... did I find problems. Let's hit those...
Yours — Half Mast
ITEM Follow the TM! Follow the LO! — use the latest parts manuals. HM
ITEM — Be accurate in filling out TAERS forms. When making up the 2408-3 and 2407, be real specific on what's wrong. Forget reasons like "IT WON'T RUN". HM
ITEM — Lots of Supply problems. Let's tell the guys more on supply procedures... To use AR 735-35, use correct FSN's and current supply manuals — HM
TM 9-1917-33

PS

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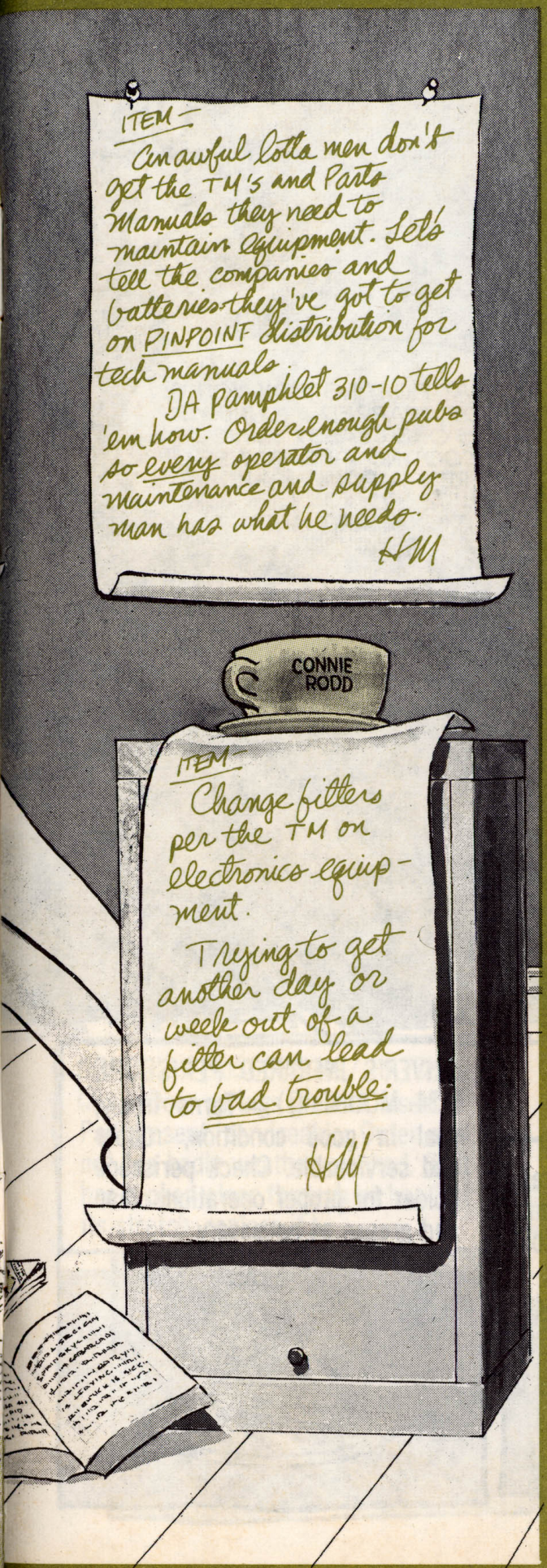

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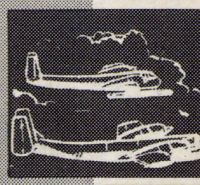

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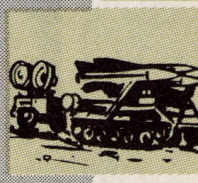

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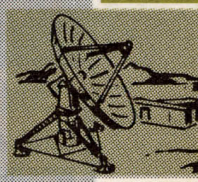

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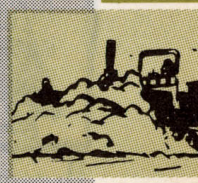

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BE YOUR OWN INSPECTOR . . .

M60 and M60A1 MAIN BATTLE TANKS

PART I

See PS 164 for PART II

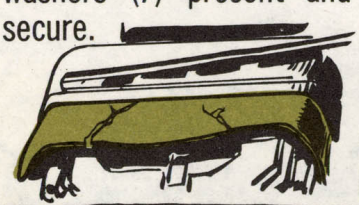
THAT FIGHTING IRON YOU'VE GOT WRAPPED AROUND YOU IS ONE CLASSY HUNK OF SCOOTING FIRE POWER... HERE'S A **POINT-BY-POINT** GUIDE SO YOU'LL KNOW IT'S **SHARP** AND **READY.**

U.S. ARMY

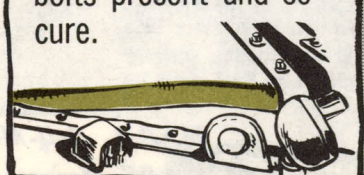
ATCI

The items in bold type are real important and must be A-OK before you move out.

FENDER EXTENSIONS—No cuts or tears, screws and washers (7) present and secure.

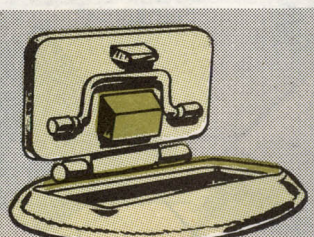


DUST SHIELDS (fillers) (2)—No cuts or tears, bolts present and secure.



TOW HOOKS — Present, lubed, not bent, lock pins (2 per hook) correctly mounted.

DRIVER'S INFRARED PERISCOPE M24 MOUNT (1) — Turns freely, seal in good condition, rubber pad serviceable. Check periscope holder for proper operation, clean and grease as necessary.



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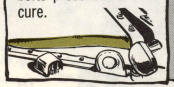

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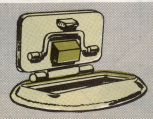
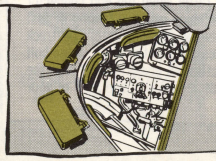


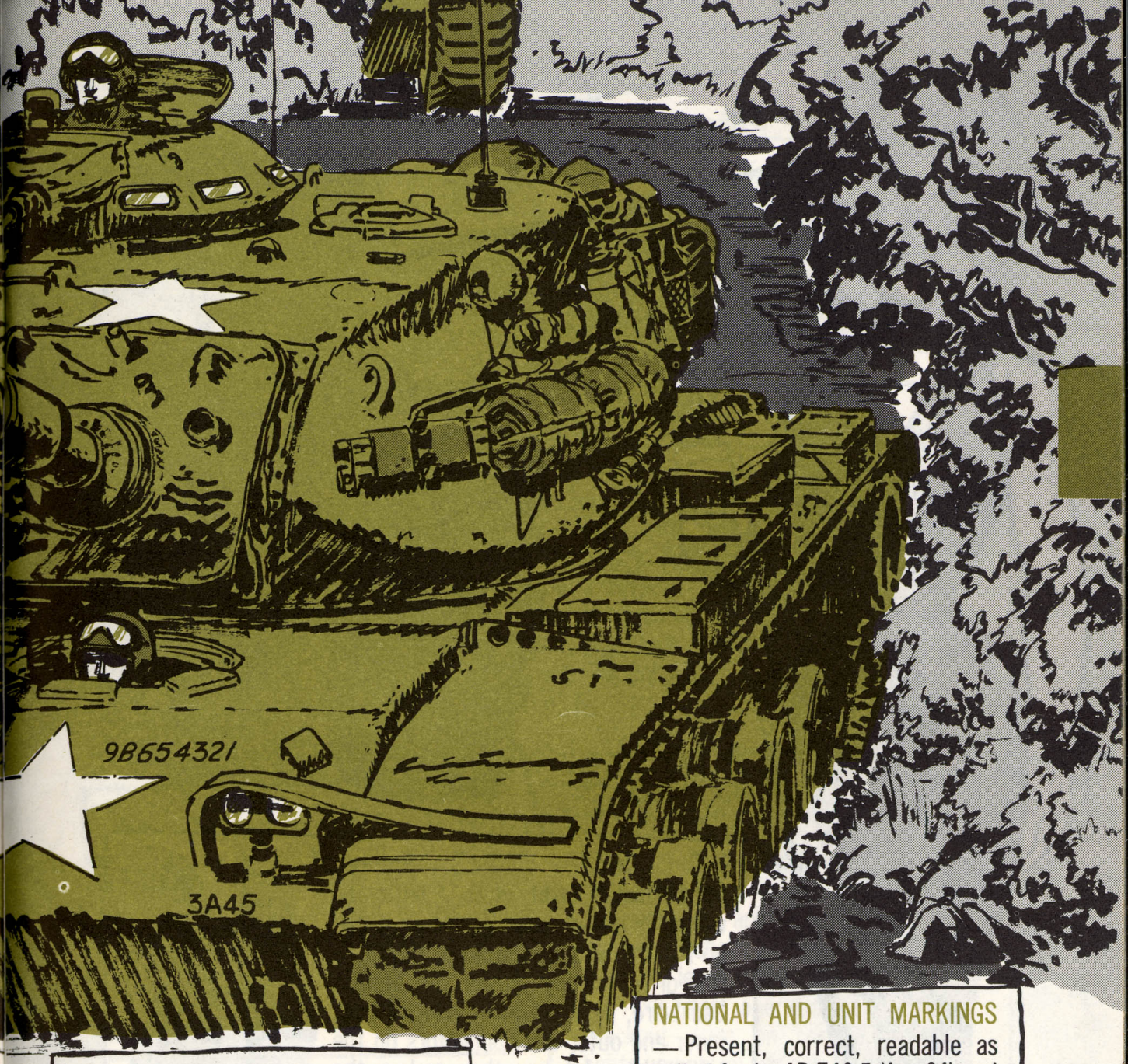
DRIVER'S PERISCOPE M27 HATCHES (3) — Door springs present, useable. Pad present, serviceable. Outer seal not too badly weather cracked. (If it has broken clear through or has lost its stretch, replace it.)



DRIVER'S HATCH — All crash pads (4) present and serviceable. Seal (10883879 for M60 and 10905064 for the M60A1) without rips, tears or chunking. Hatch slides freely. **Must lock in both open and closed positions.** (The driver could get badly hurt by a hatch that will not lock in open position.)

NATIONAL AND UNIT MARKINGS — Present, correct, readable as called for by AR 746-5 (Jun 64) and TB 746-93-1 (Oct 64). (If a stencil is used, gaps must be filled in with a brush because lettering must be solid block type.)

PS MORE



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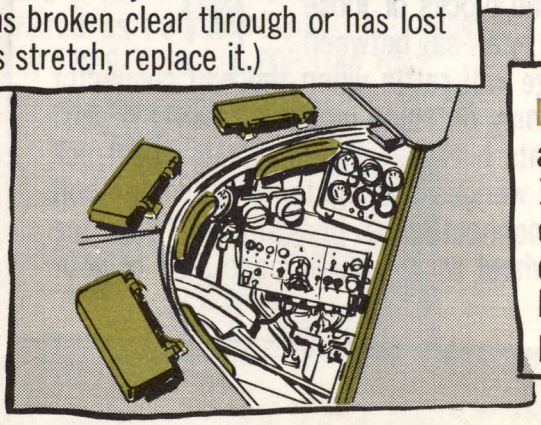

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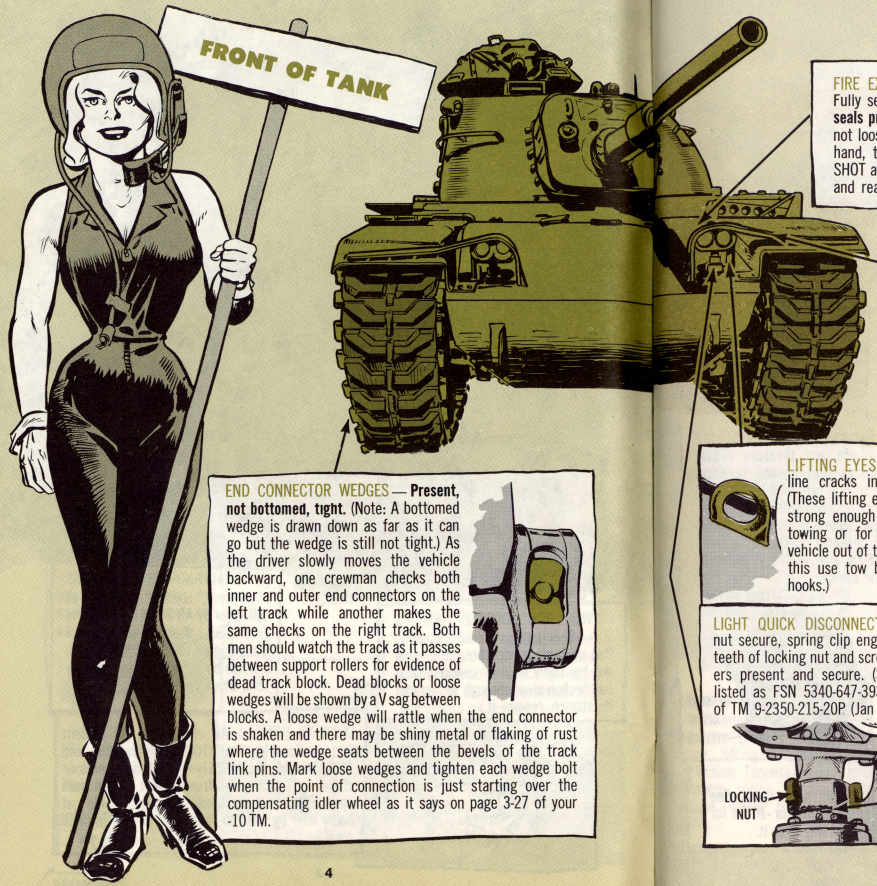
END CONNECTOR WEDGES — **Present, not bottomed, tight.** (Note: A bottomed wedge is drawn down as far as it can go but the wedge is still not tight.) As the driver slowly moves the vehicle backward, one crewman checks both inner and outer end connectors on the left track while another makes the same checks on the right track. Both men should watch the track as it passes between support rollers for evidence of dead track block. Dead blocks or loose wedges will be shown by a V sag between blocks. A loose wedge will rattle when the end connector is shaken and there may be shiny metal or flaking of rust where the wedge seats between the bevels of the track link pins. Mark loose wedges and tighten each wedge bolt when the point of connection is just starting over the compensating idler wheel as it says on page 3-27 of your -10 TM.



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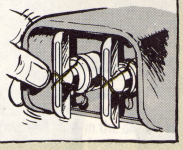
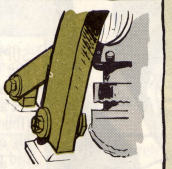
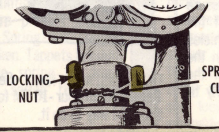


SERVICE HEADLIGHT GUARDS — Not bent or broken, bolts (4) and washers present and secure. (Flatwasher only for M60; lockwasher and flatwasher for M60A1.)



LIFTING EYES — No hairline cracks in the weld. (These lifting eyes are not strong enough to use for towing or for pulling the vehicle out of the mud. For this use tow bars or tow hooks.)

LIGHT QUICK DISCONNECT — Locking nut secure, spring clip engaged between teeth of locking nut and screws and washers present and secure. (Spring clip is listed as FSN 5340-647-3933, page 2-77 of TM 9-2350-215-20P (Jan 65).



LIGHTS — Glass, not cracked or painted over. No bulbs burned out. Check lights for operation, and replace bulbs if required. To check IR headlights feel for heat on lens. Check both high beam and low beam operation. Friendly tip: Blackout drive on service headlight lights up only on left side of the vehicle. In an emergency, you can switch left and right headlight assemblies. Likewise, all 4 service drive and blackout seal beam units are identical and can be interchanged.) To remove water or change bulbs or seal beam units, loosen 4 captive screws like it shows on page 3-20 of your -10. To get water out of blackout marker, do not remove tape. Keep marker in direct sunlight or a hot place and water will evaporate. Condensation droplets are not important.

MORE

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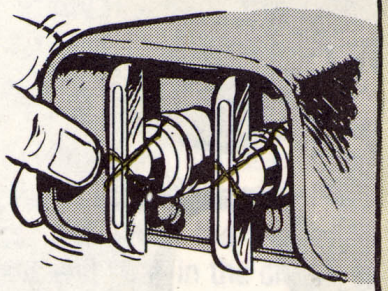

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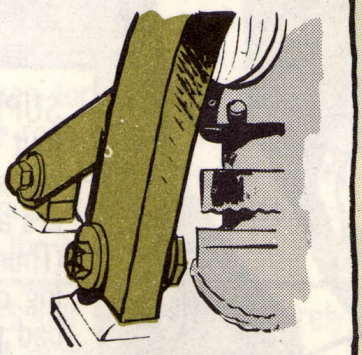

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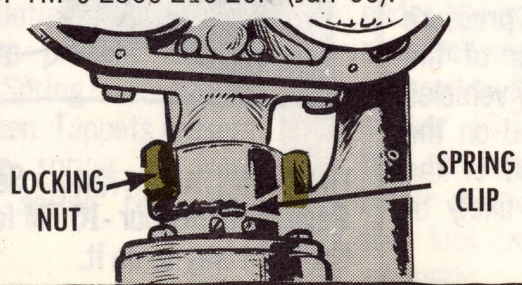

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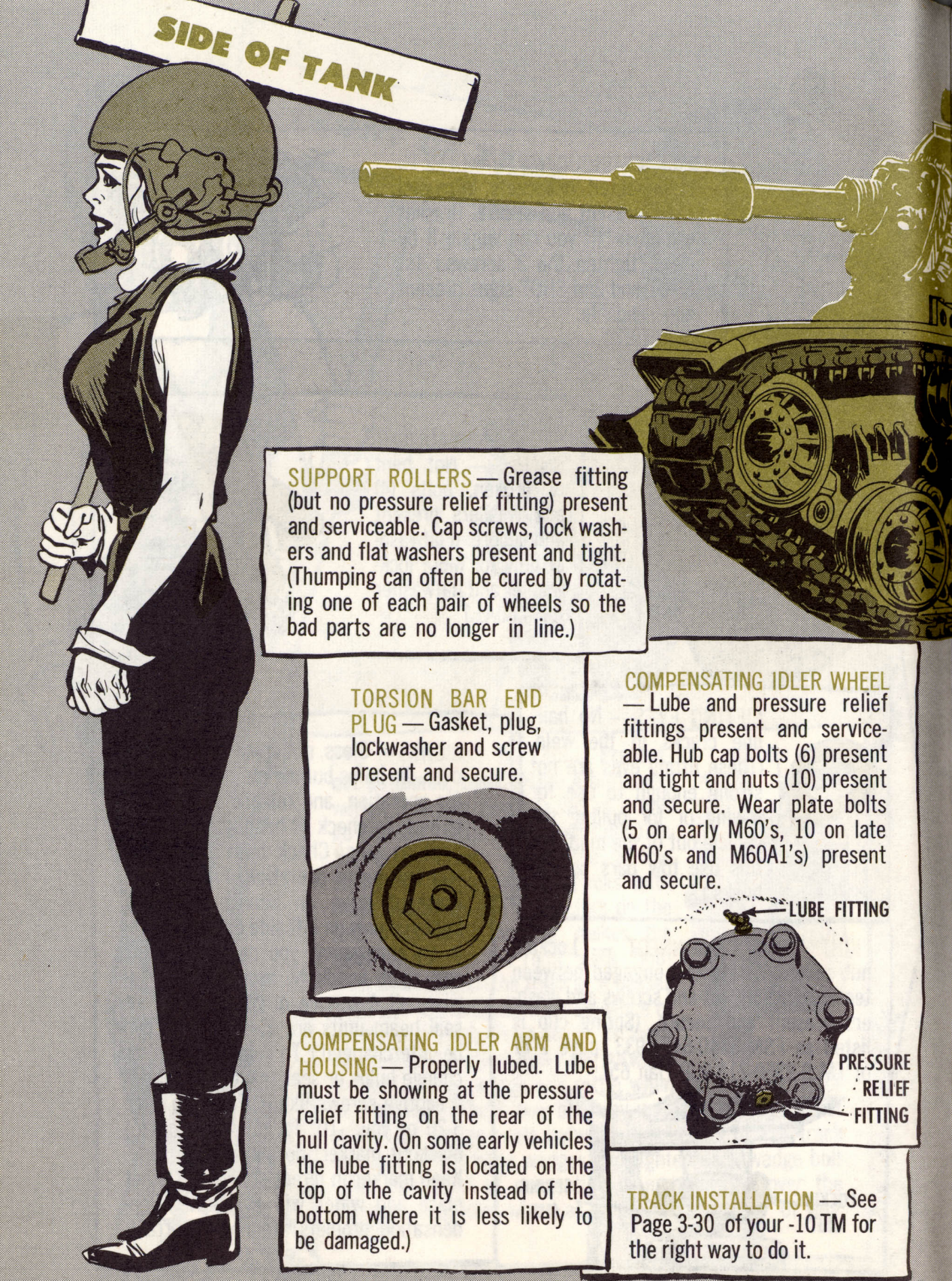


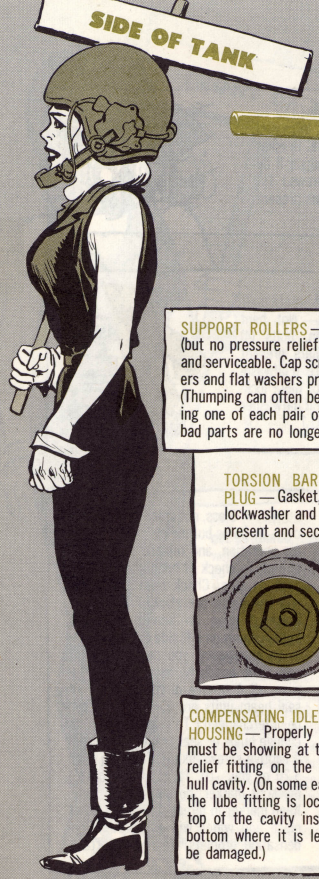
SUPPORT ROLLERS — Grease fitting (but no pressure relief fitting) present and serviceable. Cap screws, lock washers and flat washers present and tight. (Thumping can often be cured by rotating one of each pair of wheels so the bad parts are no longer in line.)

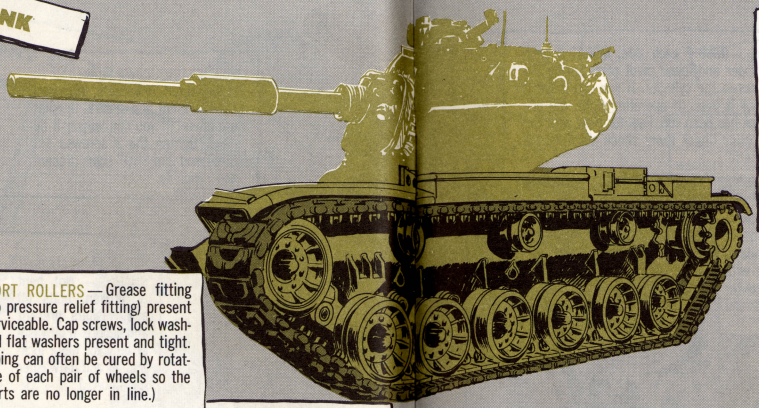
TORSION BAR END PLUG — Gasket, plug, lockwasher and screw present and secure.

COMPENSATING IDLER WHEEL — Lube and pressure relief fittings present and serviceable. Hub cap bolts (6) present and tight and nuts (10) present and secure. Wear plate bolts (5 on early M60's, 10 on late M60's and M60A1's) present and secure.

COMPENSATING IDLER ARM AND HOUSING — Properly lubed. Lube must be showing at the pressure relief fitting on the rear of the hull cavity. (On some early vehicles the lube fitting is located on the top of the cavity instead of the bottom where it is less likely to be damaged.)

TRACK INSTALLATION — See Page 3-30 of your -10 TM for the right way to do it.





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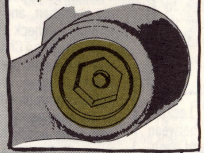

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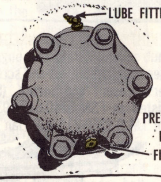


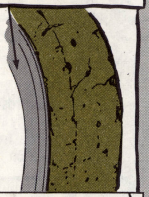
TRACK INSTALLATION — See Page 3-30 of your -10 TM for the right way to do it.

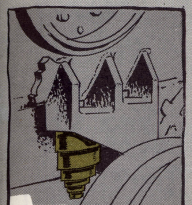
ROAD WHEELS (first and sixth each side) — Pressure relief lube fitting (15 PSI) and grease fitting present, serviceable. Bolts (10) secure and with lock washers and flat washers. Lube seals not leaking. Check for broken torsion bar by looking at the angle of the track. (No. 6 only) If the bar is broken the wheel will not be pressing down on the track. For No. 1 the tank will sway in the direction of the side that has the broken torsion bar.

ROAD WHEELS (2, 3, 4, 5 each side) — Everything same as above except you test for broken torsion bars by trying to pry up the road wheels with a tanker's bar. Put your bar under the wheel from the front. If you can raise the wheel easily the bar is broken.

WEAR PLATES (all wheels) — Securely mounted, not cracked or warped.

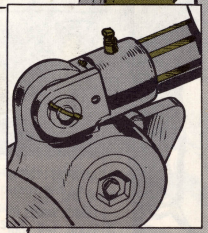
RUBBER ON ALL WHEELS — Not separated from bonding or chunked so badly that the wheel thumps during use. Base separation and chunking are permitted on wheels so long as there is no thumping or injury to seals and bearings. Eyeball TM 9-2630-200-14 (Oct 62) for the dope on permitted wear limits.



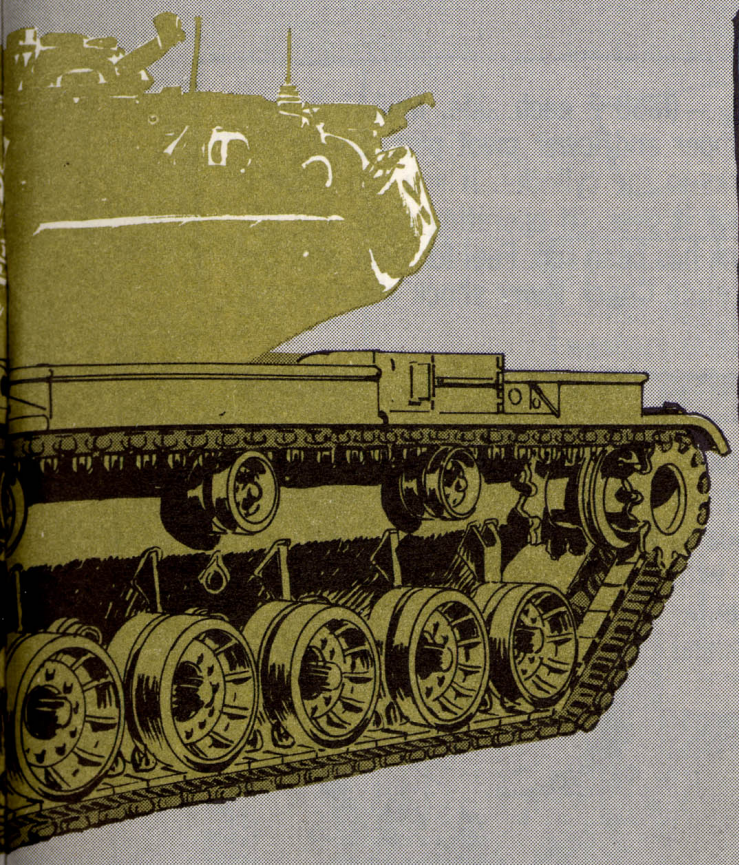


VOLUTE BUMPER SPRINGS — Mounting bolts and lock washers present and secure. Spring not cracked or broken. Tappets present. (Double spring on front, single spring rear, both sides.)

TRACK ADJUSTING LINK — **Cap screw secure.** (Cap screw can be securely tightened only when any one of the 6 ridges on the link is under the screw.) Link not extended beyond red painted groove. (See page 3-26 in your -10 TM.) Grease fitting present and lubed, cotter pin in nut, screw and lock washer in pin assembly.



MORE

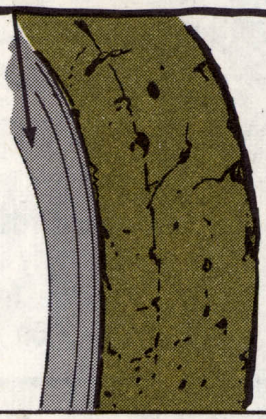


ROAD WHEELS (first and sixth each side) — Pressure relief lube fitting (15 PSI) and grease fitting present, serviceable. Bolts (10) secure and with lock washers and flat washers. Lube seals not leaking. Check for broken torsion bar by looking at the angle of the track. (No. 6 only) If the bar is broken the wheel will not be pressing down on the track. For No. 1 the tank will sway in the direction of the side that has the broken torsion bar.

ROAD WHEELS (2, 3, 4, 5 each side) — Everything same as above except you test for broken torsion bars by trying to pry up the road wheels with a tanker's bar. Put your bar under the wheel from the front. If you can raise the wheel easily the bar is broken.

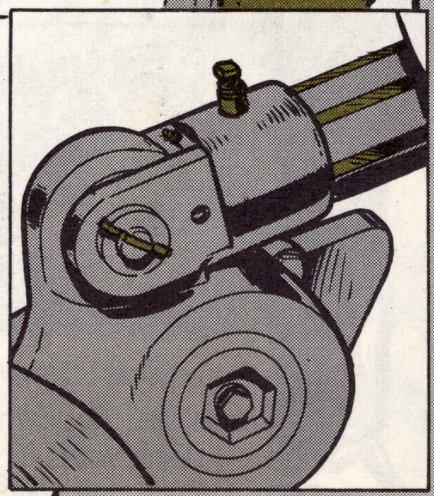
WEAR PLATES (all wheels) — Securely mounted, not cracked or warped.

RUBBER ON ALL WHEELS — Not separated from bonding or chunked so badly that the wheel thumps during use. Base separation and chunking are permitted on wheels so long as there is no thumping or injury to seals and bearings. Eyeball TM 9-2630-200-14 (Oct 62) for the dope on permitted wear limits.



VOLUTE BUMPER SPRINGS — Mounting bolts and lock washers present and secure. Spring not cracked or broken. Tappets present. (Double spring on front, single spring rear, both sides.)

TRACK ADJUSTING LINK — **Cap screw secure.** (Cap screw can be securely tightened only when any one of the 6 ridges on the link is under the screw.) Link not extended beyond red painted groove. (See page 3-26 in your -10 TM.) Grease fitting present and lubed, cotter pin in nut, screw and lock washer in pin assembly.

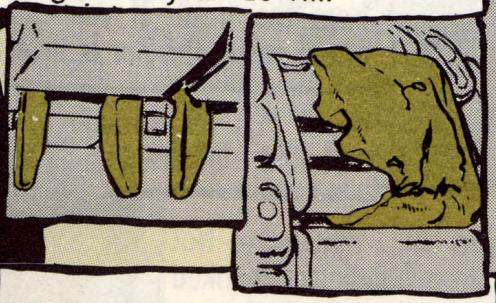


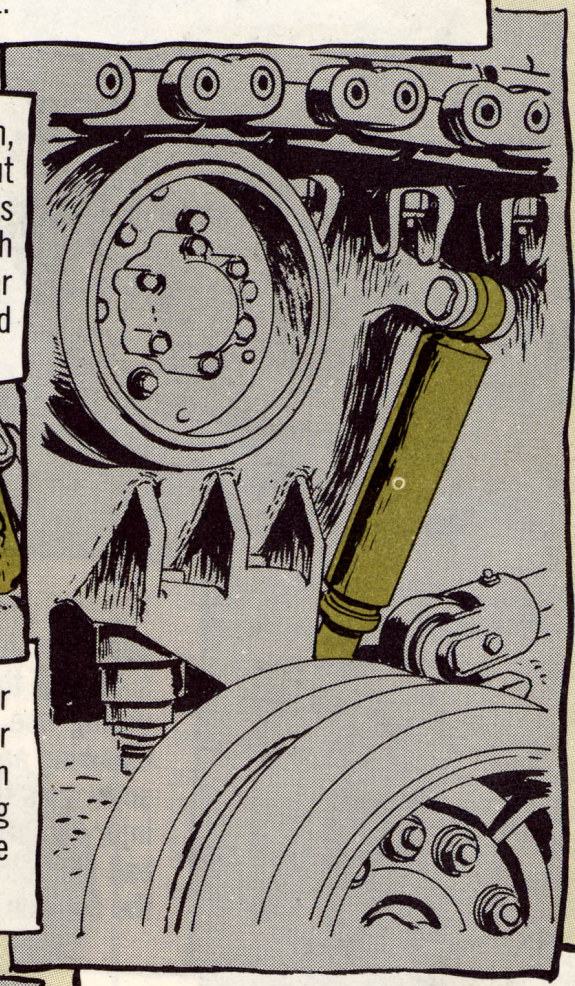
PS MORE

SIDE OF TANK

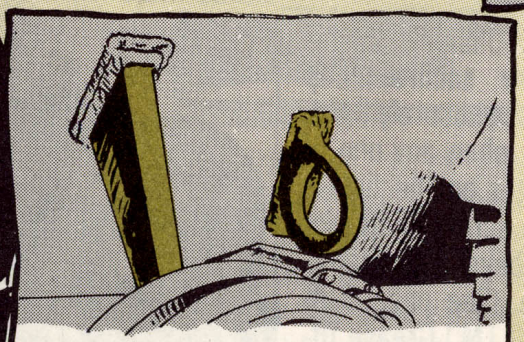
FRICTION SHOCK ABSORBERS — (M60 2 each side, M60A1 3 each side) — Cotter pins in both upper and lower pivot pins. Spring unbroken and no cracks or breaks in the cylinder. If you can move it easily, have your mechanic look it over. (If operating right, the cylinder will heat up after the tank has been run. Feel for heat with the back of your hand . . . be careful!) Check lower shock absorber pin lug lock. If it is broken, replace it.

CENTER GUIDES — Not broken, bent, or loose. Bolt, cap and nut present and secure. (If a guide is bent, it has to be cut loose with a cutting torch.) See the center guide checks on page 3-28 and fig 3-9 of your -10 TM.

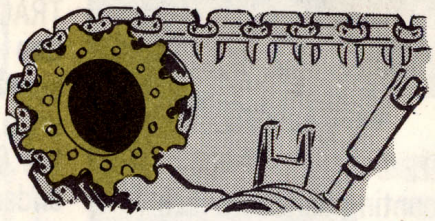




TRACK BLOCKS — Not cracked or too badly worn or chunked. (Wear standards in TM above.) Track on properly with V of grouser facing to the front as you look at the track on the support rollers.



ROADWHEEL ARM STOPS (4 each side) and TIEDOWNS (3 each side) — Check welds for hairline cracks. If found, tell your unit mechanic.

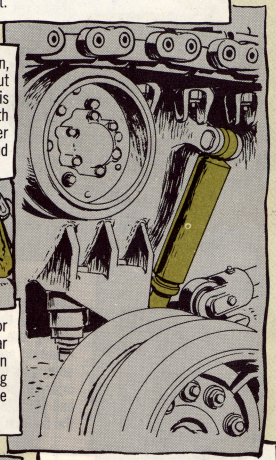


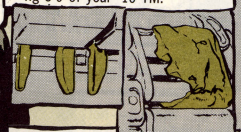
TRACK DRIVE SPROCKETS—**All bolts and self-locking nuts present and secure.** Have your company mechanic check with the wear gage and reverse sprocket or replace as necessary. Change 2 (Nov 61) to TB 9-291 has the dope.

SIDE OF TANK

FRICTION SHOCK ABSORBERS — (M60 2 each side, M60A1 3 each side) — Cotter pins in both upper and lower pivot pins. Spring unbroken and no cracks or breaks in the cylinder. If you can move it easily, have your mechanic look it over. (If operating right, the cylinder will heat up after the tank has been run. Feel for heat with the back of your hand . . . be careful!) Check lower shock absorber pin lug lock. If it is broken, replace it.

CENTER GUIDES — Not broken, bent, or loose. Bolt, cap and nut present and secure. (If a guide is bent, it has to be cut loose with a cutting torch.) See the center guide checks on page 3-28 and fig 3-9 of your -10 TM.





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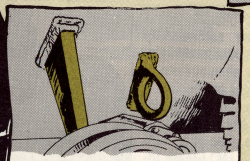
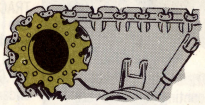


ROADWHEEL ARM STOPS (4 each side) and TIEDOWNS (3 each side) — Check welds for hairline cracks. If found, tell your unit mechanic.



TRACK DRIVE SPROCKETS—**All bolts and self-locking nuts present and secure.** Have your company mechanic check with the wear gage and reverse sprocket or replace as necessary. Change 2 (Nov 61) to TB 9-291 has the dope.

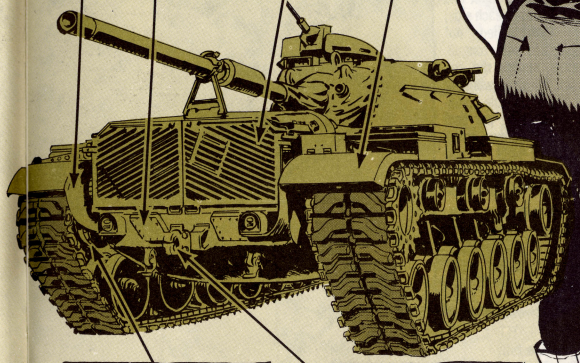
REAR OF TANK

FENDER SHIELDS — Not broken or ripped,screws(9) each with washer, lockwasher, washer and nut, all present and secure.

ENGINE ACCESS DOORS — Not sprung, bolts and washers present and secure, deflectors not mashed or filled with debris.

ACCESS COVERS — Each complete with gasket, screws (8) and lockwashers. Screws present and tight, gasket seal tight.

FENDERS—Not bent or broken. Securely mounted with bolts (6) and flat washers.



FINAL DRIVES—Remove plug. If oil runs out when cold it's over-filled. Wipe off all metallic particles from magnet. Fill if necessary, but not past the center plug line. (Check quarterly.)

TOWING PINTLE — Turns freely, locks, all bolts present and secure, lube fittings (3) serviceable, safety cotter key present and secured by chain, cotter key and nut present.

MORE

REAR OF TANK
FENDER SHIELDS — Not broken or ripped, screws (9) each with washer, lockwasher, washer and nut, all present and secure.
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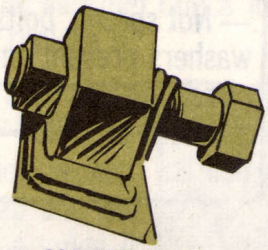
TOWING PINTLE — Turns freely, locks, all bolts present and secure, lube fittings (3) serviceable, safety cotter key present and secured by chain, cotter key and nut present.

P.S. MORE

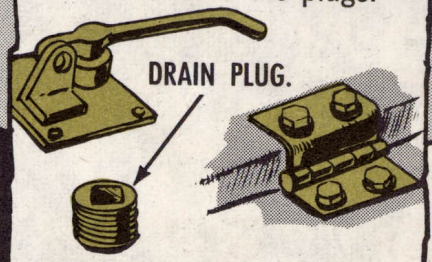
GRILL DOORS — Free from leaves, mud and glop. Combat lock (1 each side) with lockwasher and lightly lubed bolt. Door hinges oiled. Pins, (3 each side) equipped with flat washer and cotter pin. Bolts (3 each side) with lockwashers. Use care when you check the engine oil level if the main gun is in travel lock. On some M60A1's the number 4 grill door can damage the gun shield cover. To play it safe, get the gun out of travel lock and traverse the turret about 6 to 8 inches for clearance.

DOOR HINGE

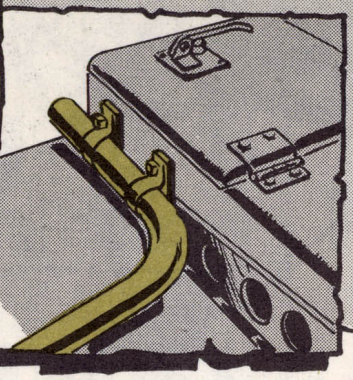


COMBAT LOCK

FENDER STOWAGE BOXES — Hinges lightly oiled, all bolts with flatwashers present and tight. All handles (5 each side) present, lightly oiled, not bent, complete with tongue, flat washer, slotted nut and cotter pin. All strap webbing present and in useable condition. Drain plugs (2 per box) present. Use screw driver FSN 5120-277-9489 if you need to remove the plugs.

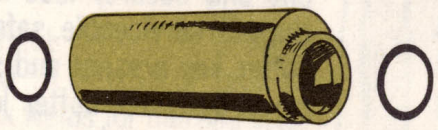


DRAIN PLUG.



PERSONNEL HEATER EXHAUST — **Pipe fully seated,** 2 bolts tight and with star washers.

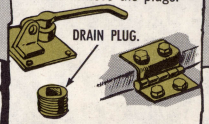
BORE EVACUATOR — Check "O" rings. Rubber not chipped or broken.



FUEL TANK — Check for leaks, particularly at the welds.

GRILL DOORS — Free from leaves, mud and glop. Combat lock (1 each side) with lockwasher and lightly lubed bolt. Door hinges oiled. Pins, (3 each side) equipped with flat washer and cotter pin. Bolts (3 each side) with lockwashers. Use care when you check the engine oil level if the main gun is in travel lock. On some M60A1's the number 4 grill door can damage the gun shield cover. To play it safe, get the gun out of travel lock and traverse the turret about 6 to 8 inches for clearance.

FENDER STOWAGE BOXES — Hinges lightly oiled, all bolts with flatwashers present and tight. All handles (5 each side) present, lightly oiled, not bent, complete with tongue, flat washer, slotted nut and cotter pin. All strap webbing present and in useable condition. Drain plugs (2 per box) present. Use screw driver FSN 5120-277-9489 if you need to remove the plugs.



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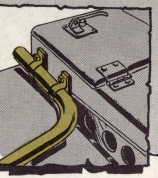


BORE EVACUATOR — Check "O" rings. Rubber not chipped or broken.

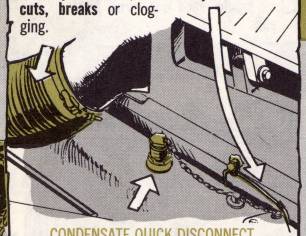
FUEL TANK — Check for leaks, particularly at the welds.

TOP OF TANK

DOOR AND COVER ASSEMBLIES — **All bolts tight with lockwashers and flatwashers. Open smoothly.**

HOSES — Air cleaner intake and outlet hoses securely mounted, **no cuts, breaks** or clogging.

FUEL GAGE WIRE — Not broken or frayed.



CONDENSATE QUICK DISCONNECT PLUG — Chain present and attached at both ends. Spring compresses freely.

TOP DECK FRAME BOLTS — 3 large (1½"), 2 small (1⅛") each side. Present, tight, with lockwashers and flat washers.

DOOR (COVER) ASSEMBLIES (3) — Each with 4 bolts, each bolt with flat washer and lock washer.

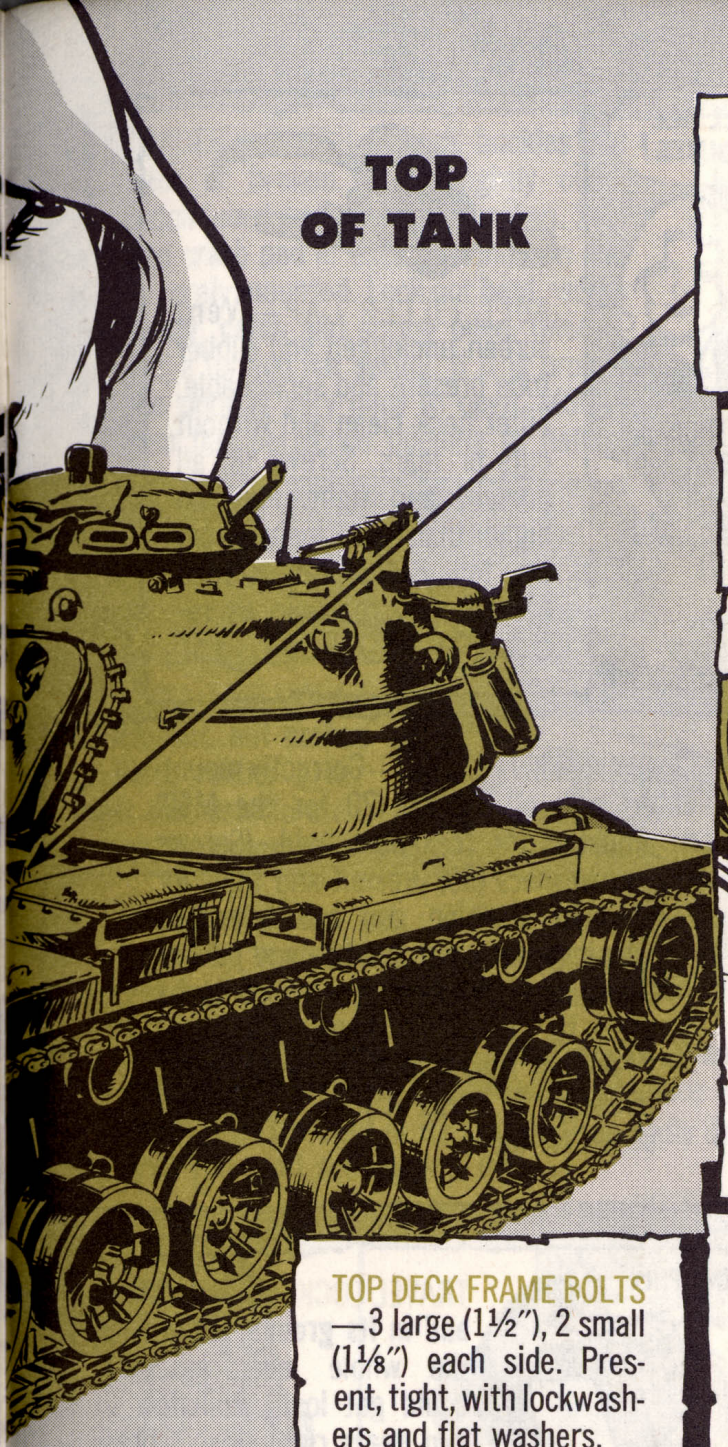
OIL COOLER SCREENS — Not clogged or torn. (If they're dirty due to dust being held by spilled oil, clean with dry cleaning solvent.)

OIL COOLERS — Eyeball for **oil leaks,** keep clean.

OIL FILLER AND CHECK PLUGS — Spring and gasket OK on both. **Oil at proper level according to the LO.**

MORE

TOP OF TANK



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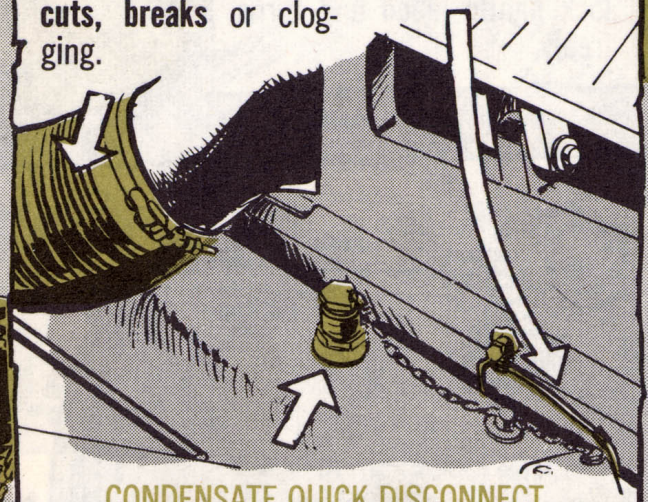

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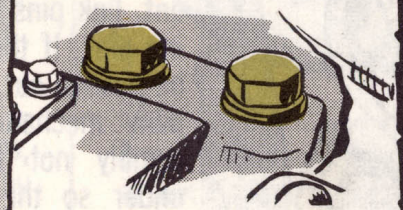

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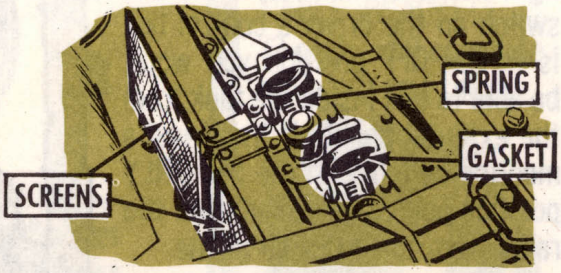
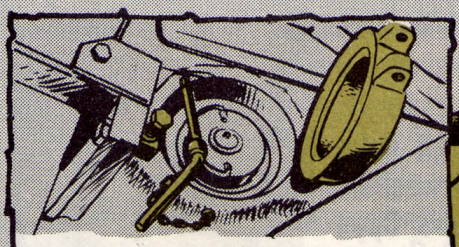


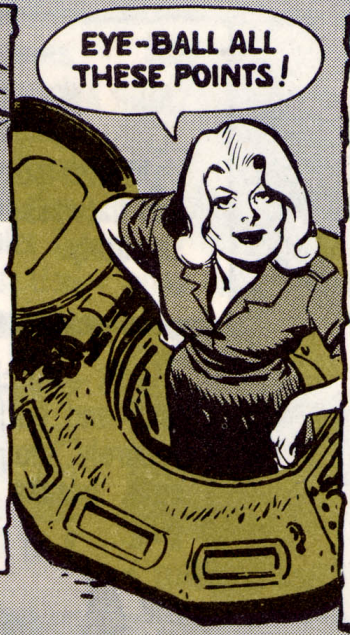
OIL COOLERS — Eyeball for **oil leaks,** keep clean.

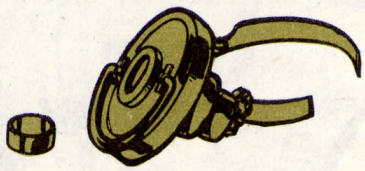
OIL FILLER AND CHECK PLUGS — Spring and gasket OK on both. **Oil at proper level according to the LO.**

PS MORE

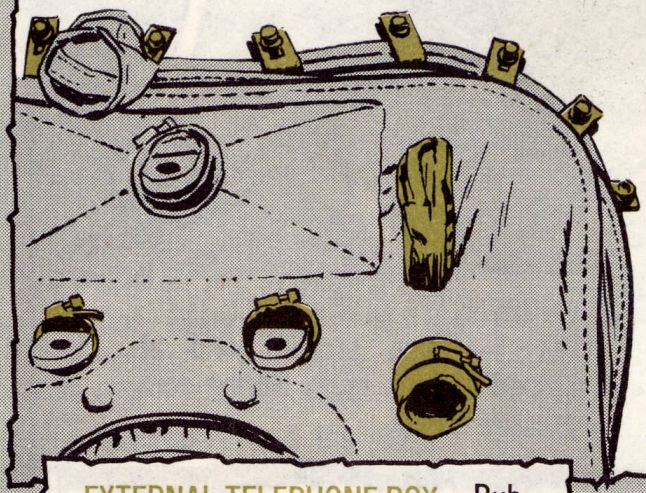


FUEL FILLER COVER — Locking pin present with chain attached at both ends. Pin clean and lightly lubed and ball bearings present. Cover and lock work freely. Combat lock lightly lubed and turns freely.



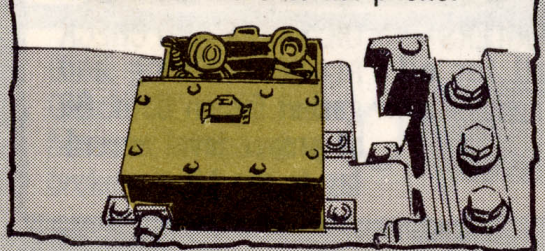


FUEL FILLER CAP — Vent screen unclogged and rubber tube present and serviceable. Filter neck clean and without cuts or tears. Screws (8) all present and tight. Fuel no higher than 6 to 8 inches from the top. Refuel rate stencil present and readable as required by TB 746-93-1.



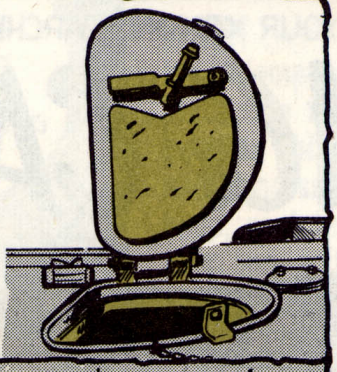
GUN SHIELD COVER — Correctly mounted with all clamps (20 for the M60) adjusted for maximum hold. (Screws and washers (35) present and tight for M60A1.) Machine gun and telescope openings not obstructed by any part of the shield. (Machine gun is not to be used to "correct" sloppy mounting.) Cover not ripped or torn. Hand feel if telescope is loose. If it is, tighten set screw on top.

EXTERNAL TELEPHONE BOX—Rubber seal in place and not worn. Wiring not worn or frayed, latch operable and hinge lubed. Signal light works. Remember, if the EXT switch on the driver's control box is in the OFF position you won't be able to talk inside the tank from the external phone. If the driver's monitor switch is in the INT ONLY position you can't transmit on the radio from the external phone.

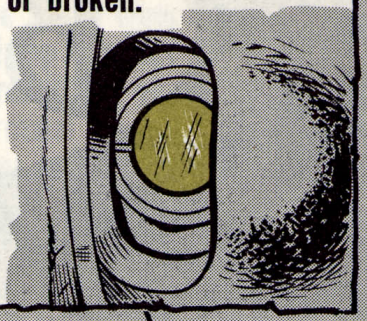


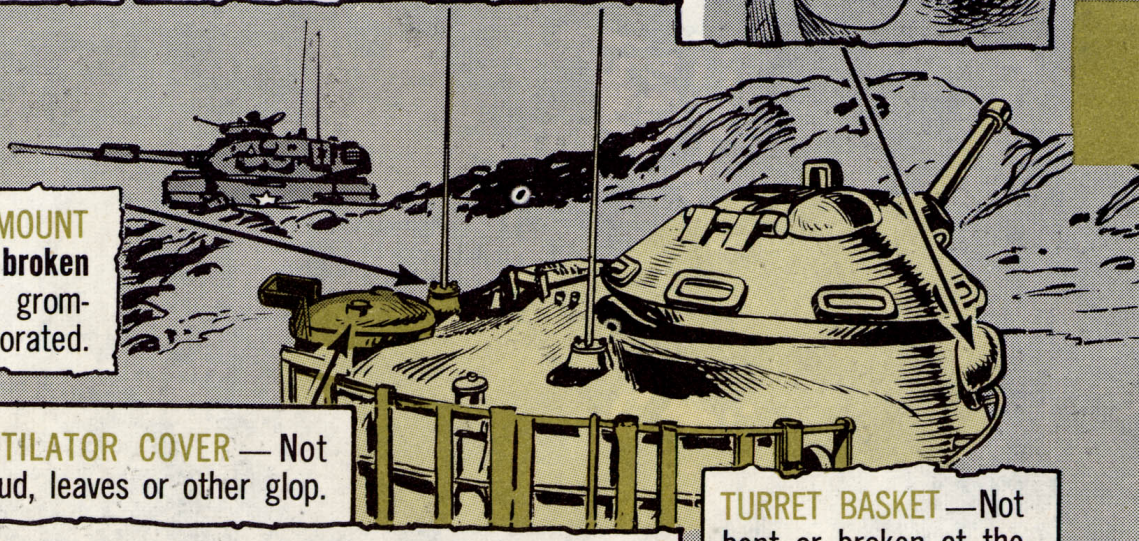
TRAVEL LOCK — **Ring present and in its groove.** (Otherwise the whole lever assembly could get lost.) Adjusted so gun seats right, insert present, link pins held by retaining pins. If the link pins can be pushed out, tell your company mechanic. Handle assembly not bent. (Fold it under so the handle won't bounce and get damaged.)

LOADER'S HATCH — Lock buckles not bent or broken. Hinge lightly oiled. Latch lubed and spring not broken. Seal and crash pad in useable condition and securely mounted. Lock not bent, works freely, catch and spring oiled. (M60A1 has a torsion bar spring. If it is broken the door is very hard to open. M60A1 also has periscope opening in hatch.)



RANGEFINDER WINDOW —**Glass not painted over or broken.**

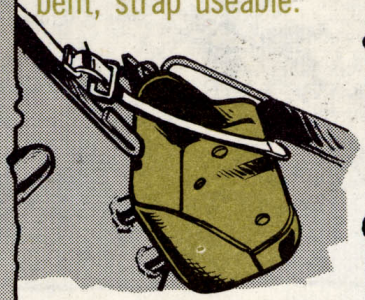




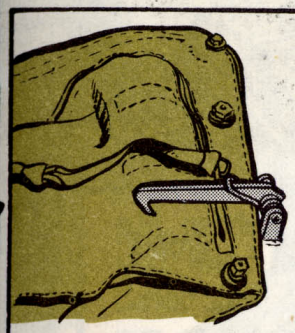
ANTENNA AND MOUNT — **Present, not broken** or bent, rubber grommets not deteriorated.

TURRET VENTILATOR COVER — Not clogged by mud, leaves or other glop.

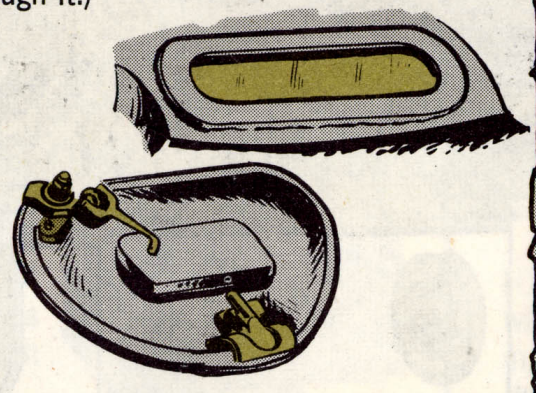
TURRET BASKET — Not bent or broken at the welds. Can rack not bent, strap useable.



COMMANDER'S CUPOLA — **Vision blocks (8) not badly broken, painted over or discolored.** (Replace a vision block if 25 per cent of its surface is so badly damaged that you can't see through it.)

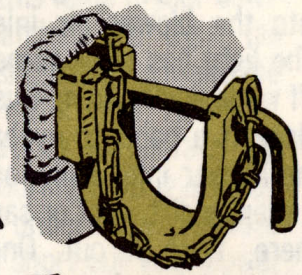


CUPOLA COVER — No tears or rips, no hole made by friction catch.



COMMANDER'S CUPOLA HATCH — Lock stop pins not bent. Springs in both locks present. Both locks lightly oiled. Crash pad present, secure and serviceable.

CABLE BRACKETS — (2 each side) complete with lock and chain.



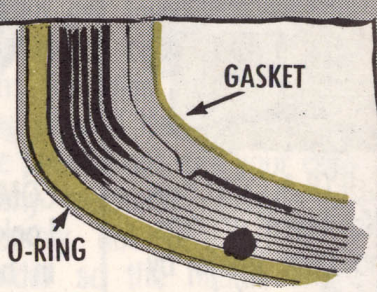
MORE IN PS 164

YOUR **XENON** SEARCHLIGHT IS A MIGHTY

BIG CANDLE

BLOWER INLET — You can flush dirt out of the heat exchanger by pouring water into the blower air inlet. (The light has to be turned off while you're doing this.) Make it a habit to eyeball the blower inlet daily, and if there's dirt, dust or sand there, flush it out. Once the water has drained out, it is OK to operate the searchlight again.

INLET AND OUTLET SCREENS — Not bent or broken. All screws and lockwashers present and tight. No dirt or leaves inside the screens. (Wash 'em out by running water gently through the blower inlet screen.)



COWLING ASSEMBLY — Take off cowling to check gasket and O-ring. They must make a secure, watertight seal. Clean glass if needed.

YOUR **XENON** SEARCHLIGHT IS A MIGHTY

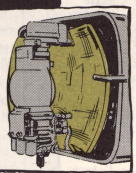
BIG CANDLE

GOT A XENON SEARCHLIGHT ON YOUR **M60 TANK** OR **M728** CEV? HERE'S A HANDY CHECK LIST TO HELP YOU KEEP THIS 75 MILLION CANDLEPOWER BEAUTY TURNING NIGHT INTO DAY.

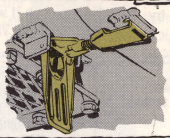
XENON LAMP — **Caution: When replacing a lamp be very careful and use a protective face shield (your gas mask) because this lamp contains xenon gas under pressure.** When you change a lamp, coat terminal insulators at both lamp and igniter ends of the power feed cable with insulation sealing compound. It comes in a tube under FSN 5970-224-5276. (Coating prevents high voltage arc-over at the igniter.)

TEST — If tactical situation permits, test light in all six methods of operation. **Looking straight into the light from close up can blind you.** That goes for both visible and IR light.

PRIMARY REFLECTOR — Free of fingerprints. (If there are any, don't use water. Get 'em off with pure alcohol. Use lens tissue or a soft, lint-free cloth.)



LATCHES (4) — Properly adjusted to make waterproof seal. (An 8 to 12-lb pull needed at end of latch lever to release a closed latch. Adjust latch arm as needed.)



CARRYING HANDLES—Not bent, enough clearance so that ends do not rub against cowling.

FORDING — You can ford with this lamp if your cowling latches are tight (as they should be) to make the cowl waterproof. However, **do not try** to operate the light during fording or when it is underwater because you'd short out your power supply and burn up the tank batteries and generator.

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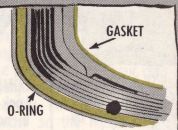

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MORE

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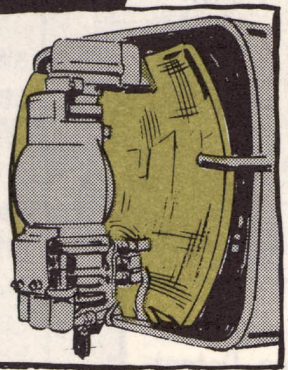

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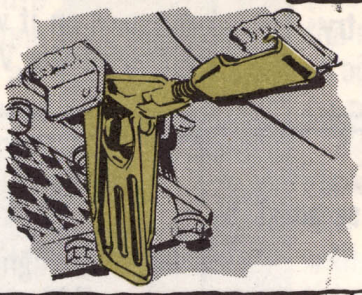

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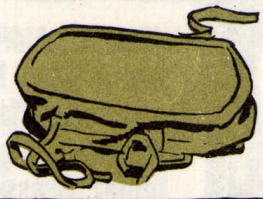
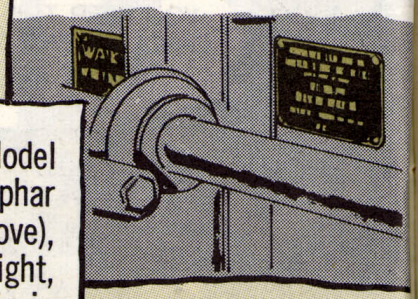
PS MORE

PROTECTIVE COVER— Not torn, all straps and buckles present.

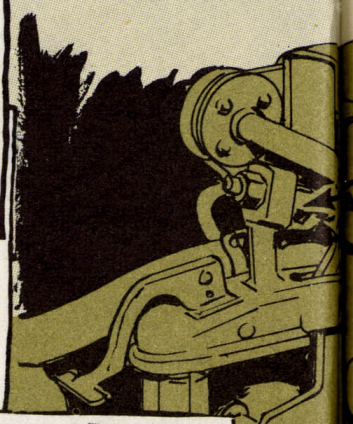


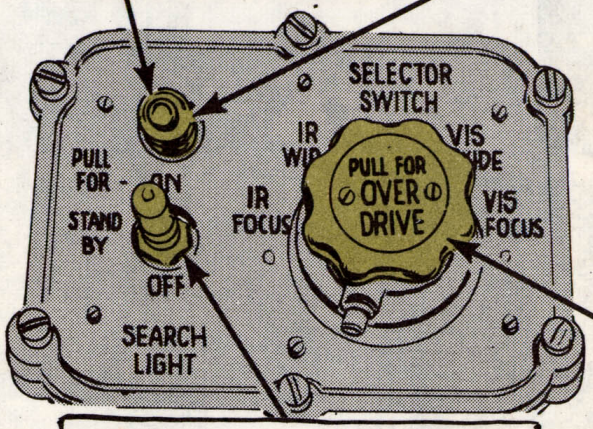
DATA PLATES — Present, readable, not painted over.



INDICATOR LIGHT—For all Model 9910 xenon searchlights (serial 1 through 700) (before MWO 5-6230-204-35/1 (Dec 65) is applied) the light on the control panel is an indicator light and glows when power switch is in ON or STAND-BY position.

WARNING LIGHT — For all Model 9910A, Model 9910B and Melphar searchlights (S/N 701 and above), it functions as a warning light, coming on when the light is in overdrive or if the lamp housing is in an overheated condition. If light is burned out replace with a No. 327 bulb from the spare bulb box.

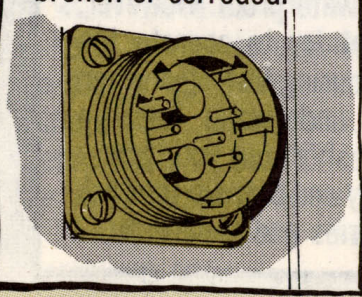




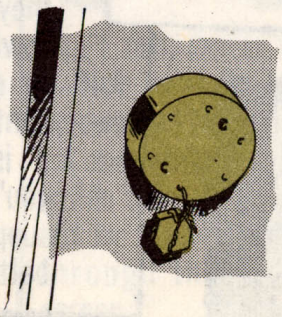
SELECTOR SWITCH — Use the selector switch right and you prevent 90 per cent of the repair jobs on this light. When you switch from one method of operation to another **do not** pull out on the overdrive. This puts a big strain on the lamp and could actually blow it up. Just **turn** the selector handle without pulling out on it. Also, you can break the safety plunger if you don't press in on it when you go from BO to either of the VIS positions.

POWER SWITCH — Operates easily in all positions. Detent not broken. (Note: Never try to override detent.)

POWER RECEPTACLE — Check for stripped threads and make sure pins are not bent, broken or corroded.



FOCUSING KNOB — Must be secured by lock wire.



MODEL DIFFERENCE — The Model 9910 lights (serial numbers below 700) are like the lights with serial numbers above 700 except for the difference above and the fact that in the Model 9910's, 7 of the relays are replaced individually but in the S/N 701 and above lights these relays are replaced as a unit by a relay assembly. Otherwise the care and repair of both lights is the same.

PROTECTIVE COVER— Not torn, all straps and buckles present.

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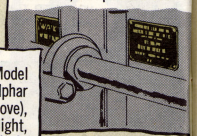

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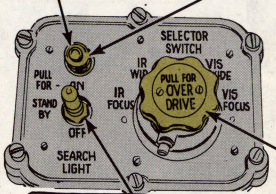

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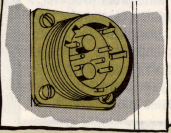
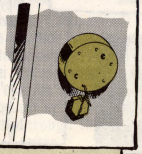


FOCUSING KNOB — Must be secured by lock wire.



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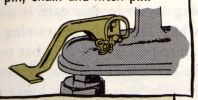
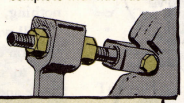
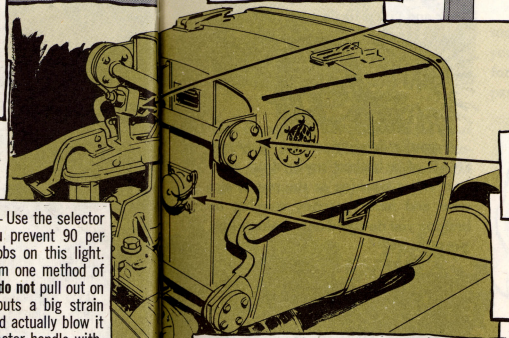
LOCK HANDLES (3) — Spring present and under tension, handle complete with cotter pin, chain and hitch pin.



VERTICAL ADJUSTMENT SCREW PIN — Cotter key present. Both vertical adjustment nuts tight and complete with flat washers.



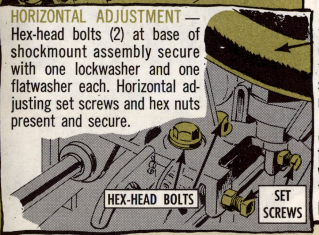
BLOWER MOTOR — The blower motor will run up to 5 minutes after you turn the searchlight OFF. Let it run until it shuts itself off, which it does after it has pulled all the heat out of the lamp. **Do not turn off** the tank's master switch before this happens because that stops the blower motor and the heat can build up and explode the lamp besides damaging the rubber insulation at the top of the lamp.



TORSION BARS — Properly anchored, no missing screws at either end.

DUMMY RECEPTACLE — Cap present and attached to safety cable. Cap threads not damaged.

HORIZONTAL ADJUSTMENT — Hex-head bolts (2) at base of shockmount assembly secure with one lockwasher and one flatwasher each. Horizontal adjusting set screws and hex nuts present and secure.



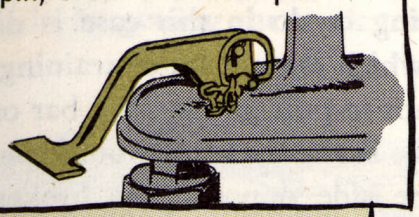
POWER CABLE — Makes good connection. Screws and lockwashers present (but no nuts). Threads not stripped. In the male (tank end) all pins present and straight. In the female, (searchlight end) no pitting damage from arcing.

Be sure you disconnect the power cable before making a repair or inspection that might bring you in contact with electrical connections. Some of the circuits are "hot" even when the power switch is in the OFF position.

Remember what TM 5-6230-204-15 says about not using the overdrive over 15 to 20 seconds in any 5-minute period is strictly for true. In fact, to be on the safe side, it wouldn't hurt to make it 10 minutes before the next operation. Before you can mount a searchlight your direct support must first apply MWO 9-2350-215-30/19 (Feb 65).

END

LOCK HANDLES (3) — Spring present and under tension, handle complete with cotter pin, chain and hitch pin.



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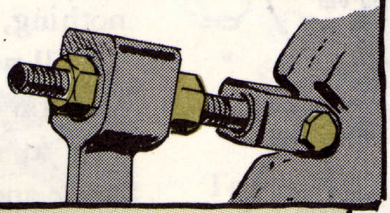

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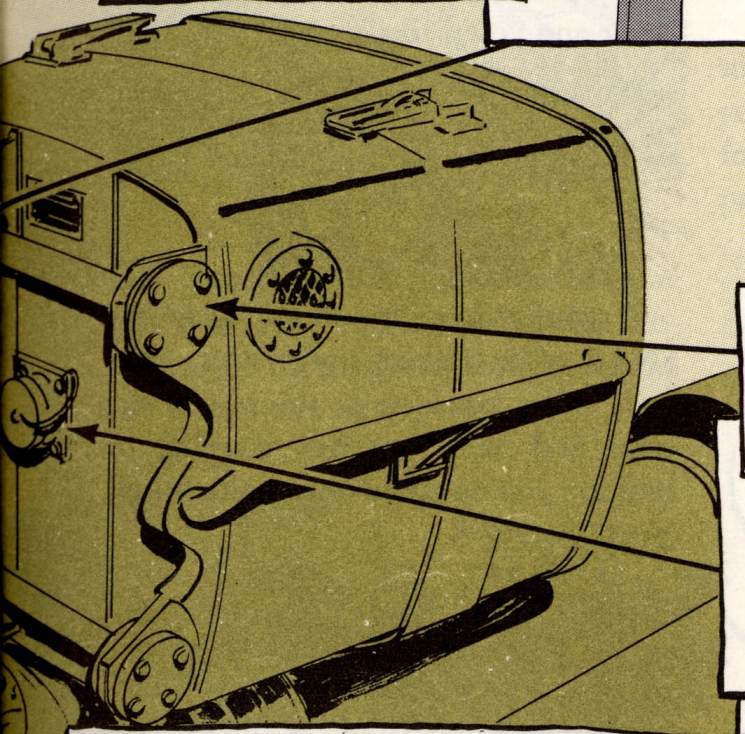

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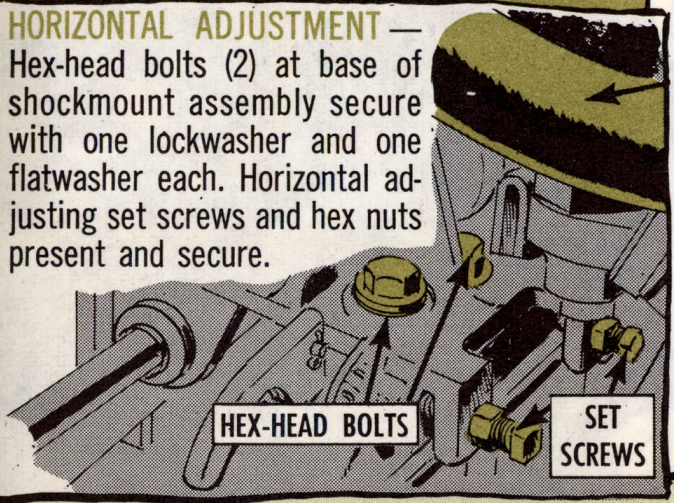

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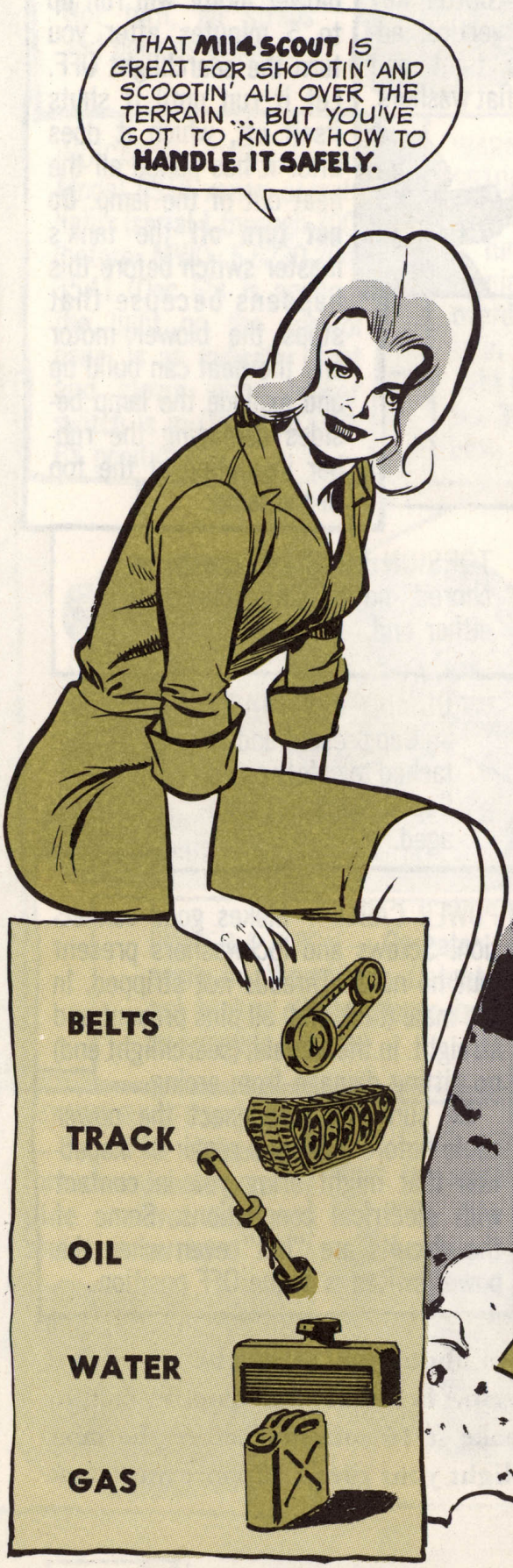
PS END

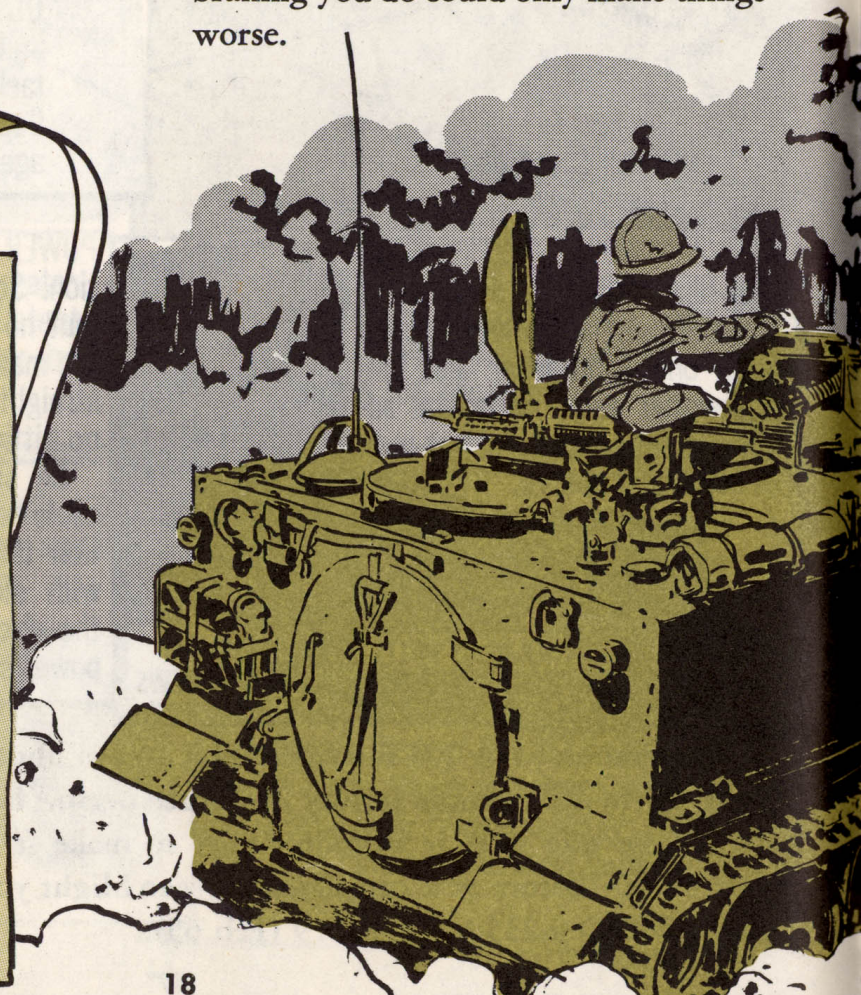
M114 SAF



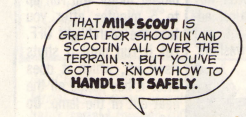
Take, like, the worst thing that could happen . . . a track breaks.

The thing to do in this case is do nothing, which takes a lot of training. You'll want to pull on the steer bar or slam on the brakes but this would spin you to the side opposite the broken track and you'd likely turn over.

If you're driving and you hear the SNAP of a broken track, drop your seat, yell a warning to the rest of the crew and hang on. Any steering or braking you do could only make things worse.



M114 SAFETY TIPS



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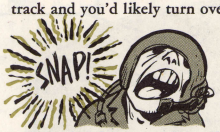
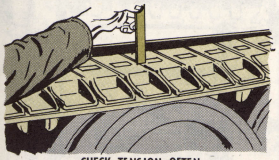


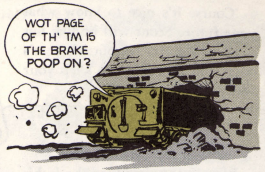
If you're driving and you hear the SNAP of a broken track, drop your seat, yell a warning to the rest of the crew and hang on. Any steering or braking you do could only make things worse.

'Course the best deal is for the track not to break in the first place. You can help by getting the track tension right



CHECK TENSION OFTEN

like it calls for on page 101 of your TM 9-2320-224-10 manual. Track tension right on the button improves the life expectancy of the track.



To keep yourself safe and your M114 sound, you need good brakes. Have your company mechanic check them out for you the way it says on page 179, para 106 of this TM 9-2320-224-20.

You could lose steer in any one of these three ways:

a. **Loose or broken water and oil pump drive belt.**
b. **Broken crank shaft.**
c. **Broken steer pump.**

All M114 and M114A1's are being retrofitted to take care of these three problems. The steer pump is gear-driven instead of belt-driven; there's a stronger crankshaft with an outboard bearing; and a different steer pump.

Also in the retrofit works is a new commander's cupola, the M26, which has power elevation and traverse.

ETY TIPS

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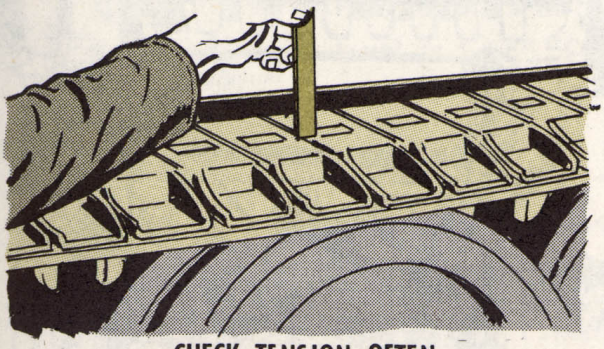

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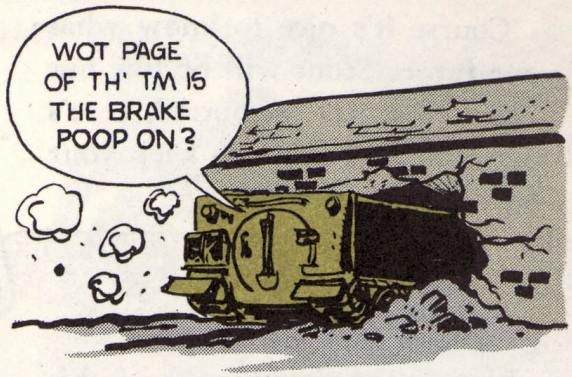

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'Course it's nice to know what your future Scout will be like but until yours gets retrofitted, here's what you should do to keep your vehicle up-snuffed . . .

WATER AND OIL DRIVE BELT

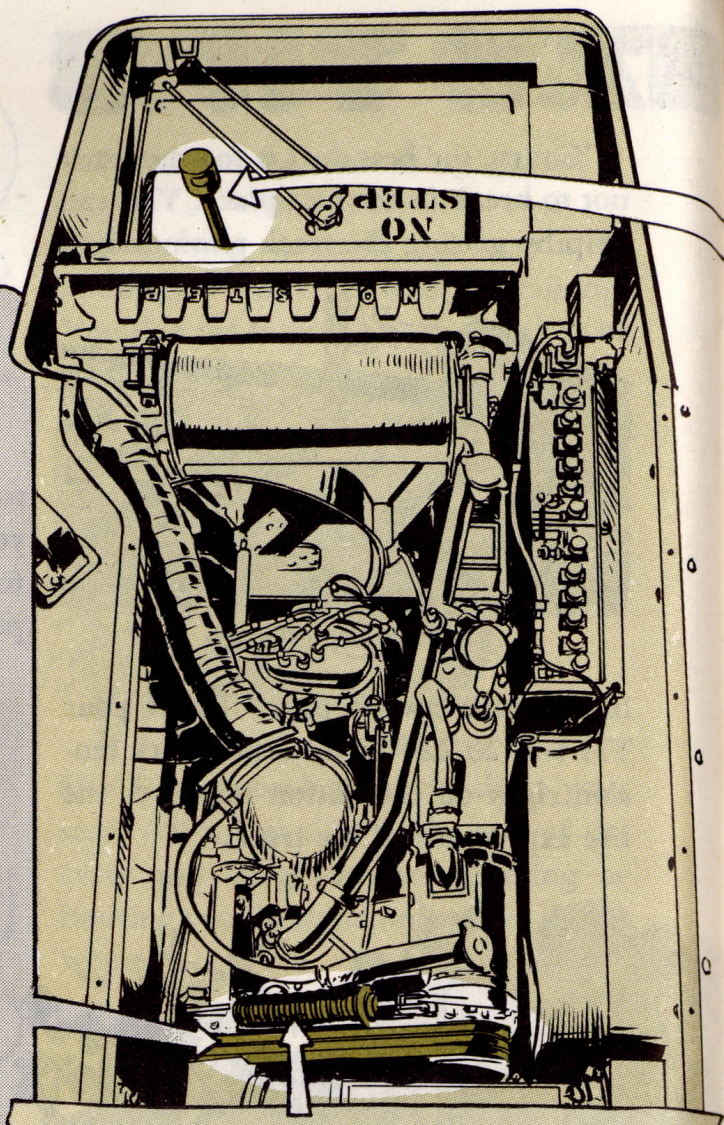
It's a little unhandy to check this belt because you have to reach down between the fan and alternator drive belts and the heater,but having the correct tension is absolutely Number One. It's right when a pull of 8 to 10 pounds on a pull scale hooked over the belt halfway between the pump pulleys deflects the belt 3/8 inch.

There's no pull scale in your OEM but your company mechanic has one (Pull scale FSN 6670-254-4634 which measures 0 to 50 pounds).

If you need a new belt, order it from page 41 of your -25P. Your mechanic will put it on for you but watch how he does it because this might be pretty handy to know.

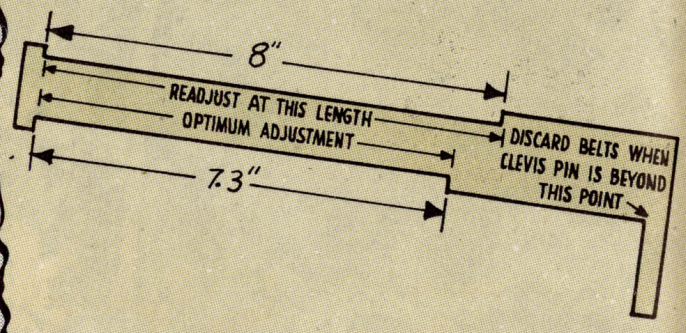
If your vehicle has a serial number under 1241, make sure MWO 9-2320-224-30/2 (Oct 63) has been applied. This is an improved adjusting device for the belt.

Likewise, if your vehicle name plate shows a serial number below 2519, check your Form 2408-5 to see if MWO 9-2320-224-20/3 (Mar 65) was applied. It improves the fan and alternator drive belt tensioner. Be sure belts are replaced in matched sets.



CRANK SHAFT HEALTH

Too much tension on the drive belts puts extra strain on the shaft. Believe it or not, if belts are too tight you can deform the crankshaft. Keep the belt tensioner between 7.3 inches and 8 inches on your tension gage.



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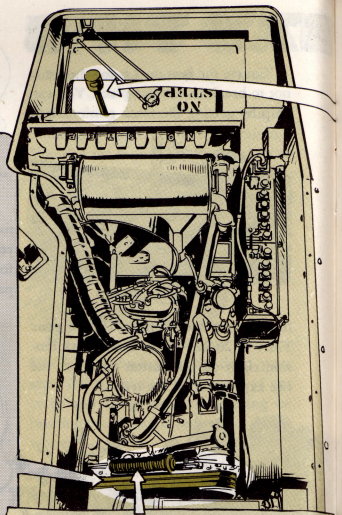

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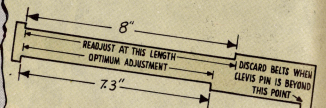
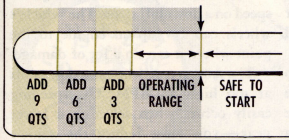
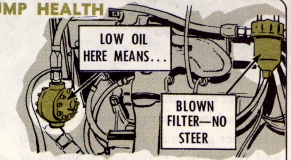


STEER PUMP HEALTH

Two things to watch for a healthy pump:

—Have enough oil (about 11 quarts for a refill) in the steer unit, so the dipstick level is SAFE TO START.





—Never rev your engine to a high RPM until it is completely warmed up. With high RPM's and cold, thick oil you could blow the steer unit oil filter off—which means no steer.

SAFE OPERATING RULES

The travel lock on your .50 caliber is for the safety of the driver as well as to keep the gun from being damaged. Unless you're in a tactical situation, keep the gun in the lock, or at least firmly held and pointed away from the driver. A free-swinging gun barrel can clobber a driver.

Use your head but not for a crash helmet. No matter how much of a hard head you are, you'll find your helmet works better for crashing into things.

Have the driver button up his hatch if the gun is going to be fired.

Leave the cowboy stuff for the boob tube. Sharp, fast turns in loose rock or gravel are not even smart on a cow pony, let alone a vehicle with two tracks which, in a turn, will be going at different speeds.

If you make sure of your footing, turn slowly, and reduce speed in bad terrain, you'll be around when the improved models are issued.

Oh, yeah, one other thing to remember . . . a good way to prevent the transmission mount from cracking is to keep the transmission mounting bolts torqued up tight at 280 ft-lbs.

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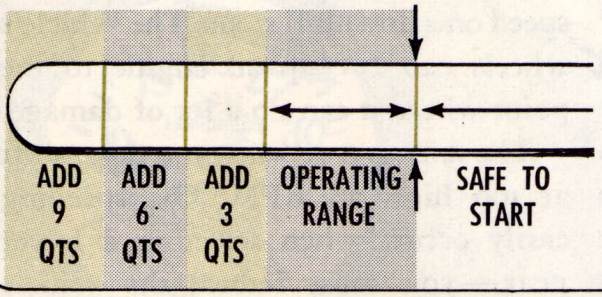

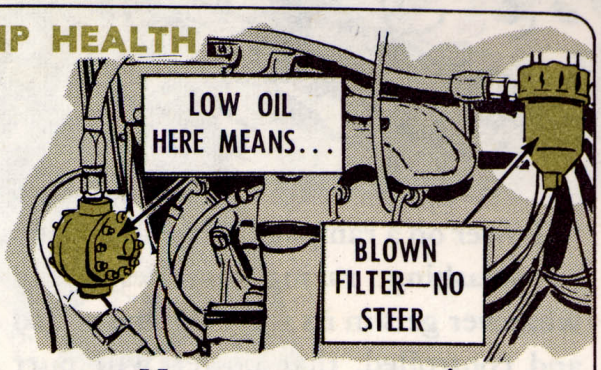

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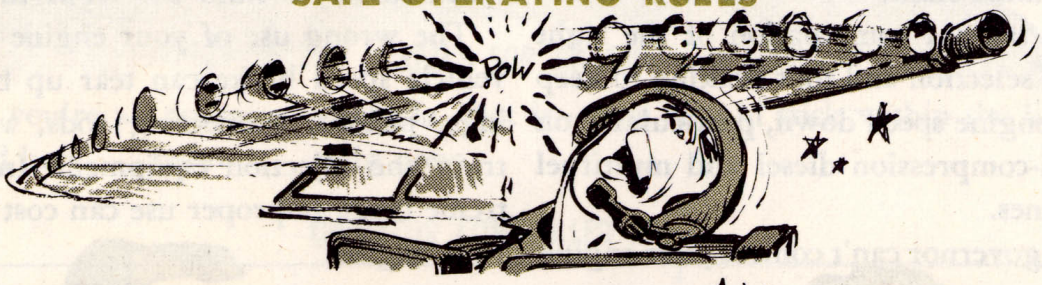

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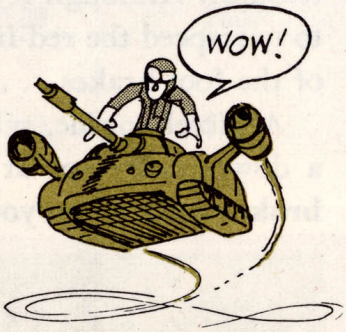

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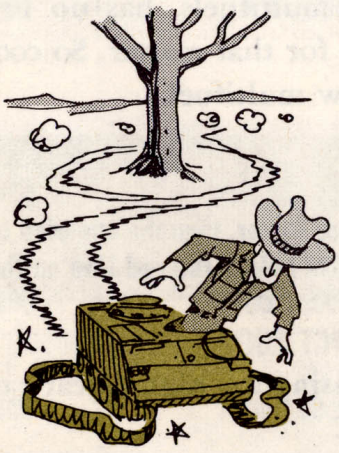

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HOLD YOUR

Power on a rampage is like a tornado . . . smashing, razing and destroying whatever gets in its way. But harnessed and controlled, that power will purr for you and serve you like a devoted Jinni.

Vehicle speed is power. Allowed to run wild, it becomes uncontrollable and no amount of engine braking alone can hold back a gung-ho truck on a downhill slant.

It takes a combination of the right gear selection and foot braking to keep the engine speed down, particularly on high-compression diesel and multifuel engines.

A governor can't control your engine speed on a downhill slope. The vehicle's wheels can rev up an engine to the point where it can do a lot of damage.

The same is true when you downshift at too high an RPM. Overspeeding easily occurs when selecting a lower gear—you must reduce the vehicle speed to stay within the RPM limits.

The wrong use of your engine as a vehicle speed brake can tear up bearings, pistons, connecting rods, valve train and injection equipment. In extreme cases, improper use can cost you your engine.

SPARK IGNITION VS DIESEL

The big difference is that a **spark ignition** engine **can** be used for downhill braking . . . but a **diesel** (combustion ignition) **cannot** be used as a braking force.

A spark ignition engine, such as the R-6602, uses spark plugs and a distributor. Although it has some braking power, you still have to be careful not to overspeed the red-line settings. You can do this very easily by constant tapping of the foot brakes . . . on . . . off . . . on . . . off.

A diesel engine, which includes the multifuels, has **no braking power** on a downgrade—or at any other time, for that matter. So cool it, pal . . . **foot brakes only** when you're driving a new multifuel.

GENERAL RULE

Go down the hill in the same, or one gear lower, than the one used coming up . . . and use the foot brake to keep engine RPM below the red line on the tach.

SO DON'T LUG

You can also get into trouble—by using too high a gear range at too low an engine RPM—overloading the engine.

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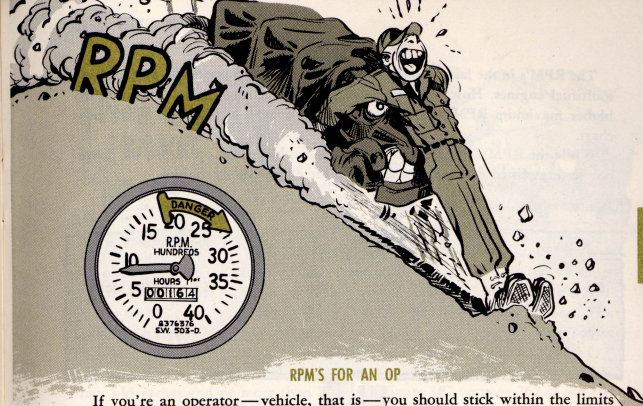


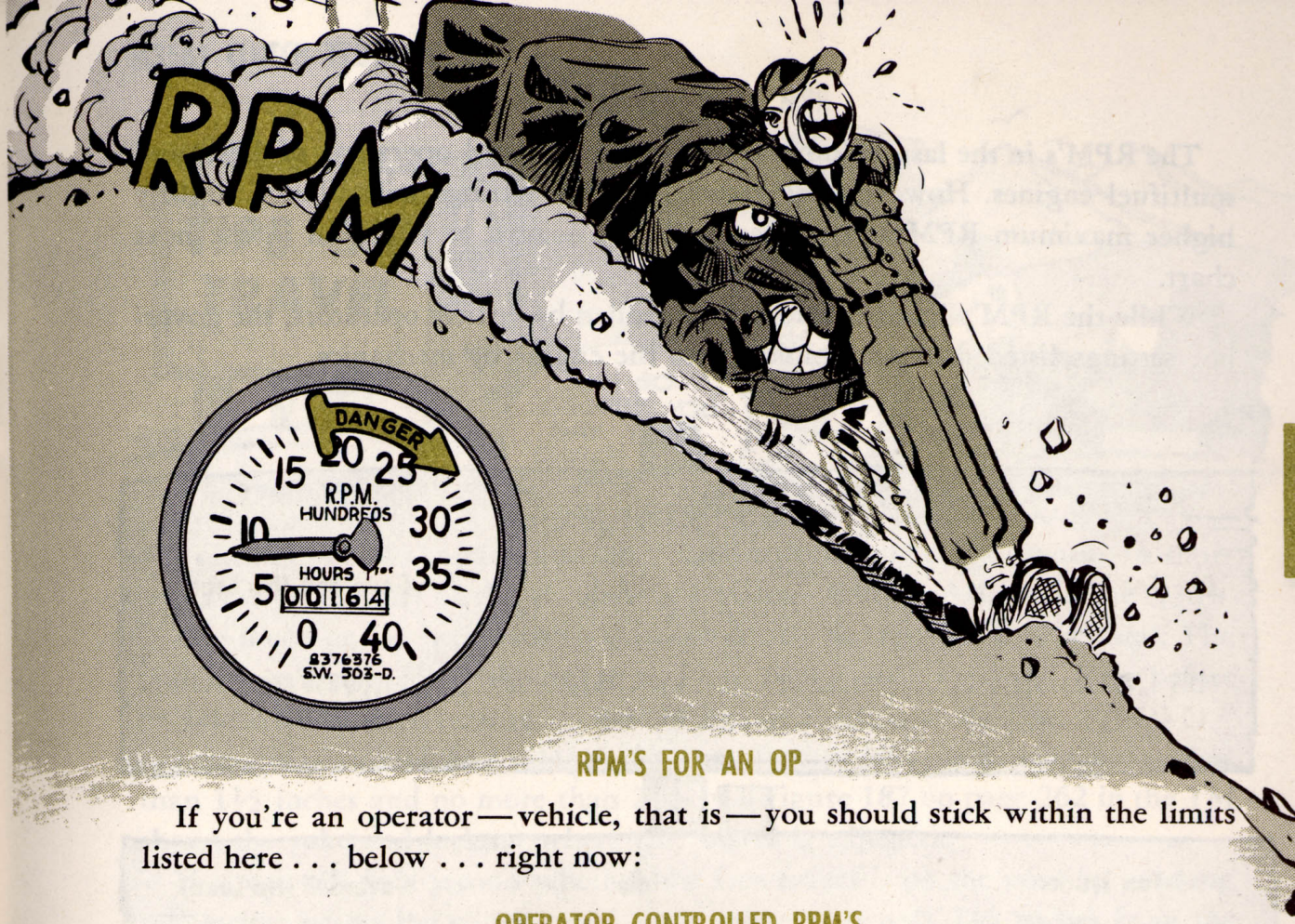
RPM'S FOR AN OP

If you're an operator—vehicle, that is—you should stick within the limits listed here . . . below . . . right now:

OPERATOR CONTROLLED RPM'S

	Minimum RPM under load. Below this RPM is lugging.	Low side of range preferred for downshifting. **Please**—do not try it above high RPM here . . . or you'll jump the red line.	Normal cruising range for most miles per gallon.	Highest RPM for use under load . . . such as pulling very heavy load up steep hill.
2½-Ton Trucks				
LDS 427-2 (multifuel)	1200	1400-1800	1400-2200	2600
LD 465-1 (multifuel)	1200	1400-1800	1400-2200	2600
5-Ton Trucks				
LDS 465-1 (multifuel)	1400	1600-1800	1800-2400	2800
ENDT-673 (diesel)	1400	1400-1600	1600-1900	2100
R-6602 (gasoline)	1400	1600-1800	1800-2400	2800

PS MORE



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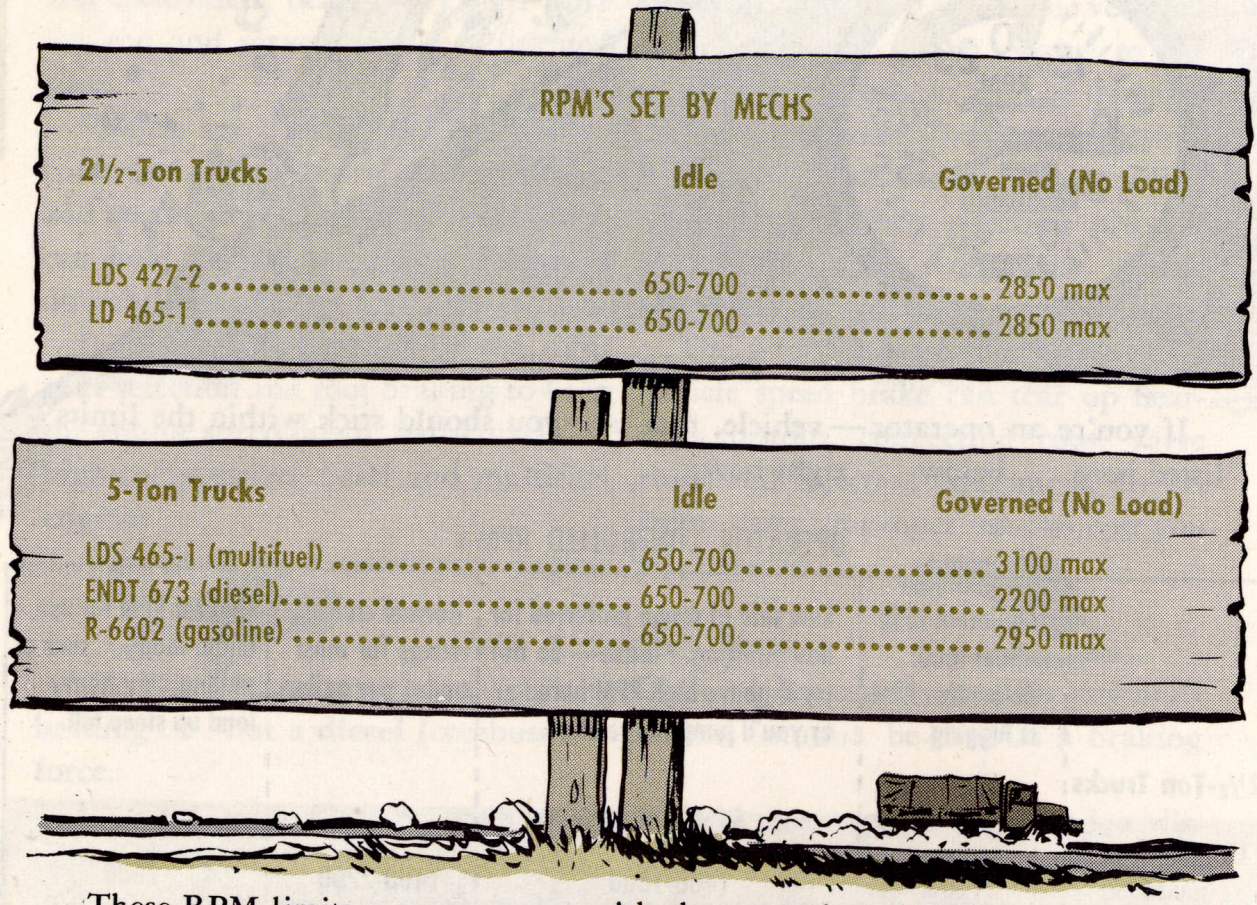
P.S. MORE

RPM'S FOR GOVERNORS

The RPM's in the last column are limits for full load operation of diesel and multifuel engines. However, the actual governor settings will allow a slightly higher maximum RPM at less than full load—such as is shown in the next chart.

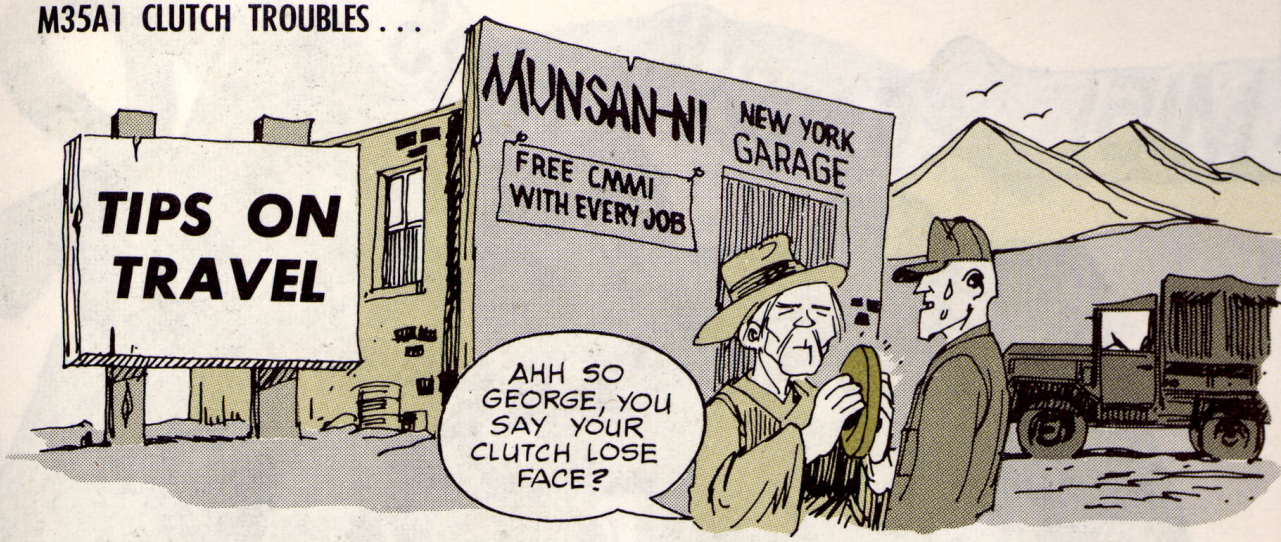
While the RPM's listed before are controlled by vehicle operators, the governor settings listed next are cranked into the engine by mechanics.



These RPM limits may not agree with the ones given in TM 9-2320-209-10 and TM 9-2320-211-10, but they are the latest established limits and will show up in future changes to the 2½- and 5-ton trucks TM's.

Do you need some o' those curved, red "Danger" arrow decals for your wheeled or tracked vehicle tachometers? Order: Red Arrow Decal, FSN 7690-999-5687. Just dip the decal in water for a few seconds and then slide off the backing paper onto the tachometer glass—clean glass for a good stick, of course.

M35A1 CLUTCH TROUBLES . . .

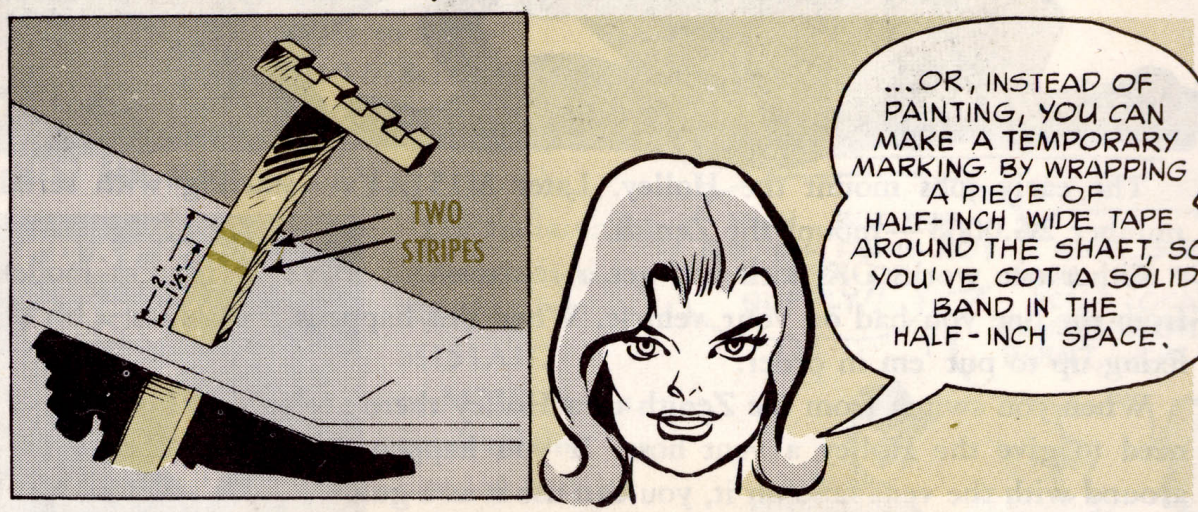


Your M35A1 2½-ton truck's clutch pedal travels only a few inches—a short trip as trips go. Part of this distance is a matter of life and death to the clutch.

Too much or too little free travel—especially too much—can be fatal. The clutch won't completely disengage and the facing will wear out long before its time, maybe even getting chewed to bits in about nothing flat.

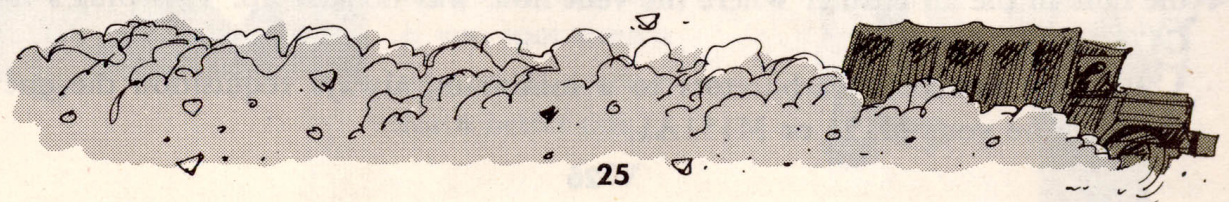
Like TM 9-2320-209-20 (Apr 65) says, free pedal travel must be no less than 1½ inches and no more than 2 inches. Figure 187 on page 262 in the TM shows the yoke and locknut where free travel is adjusted.

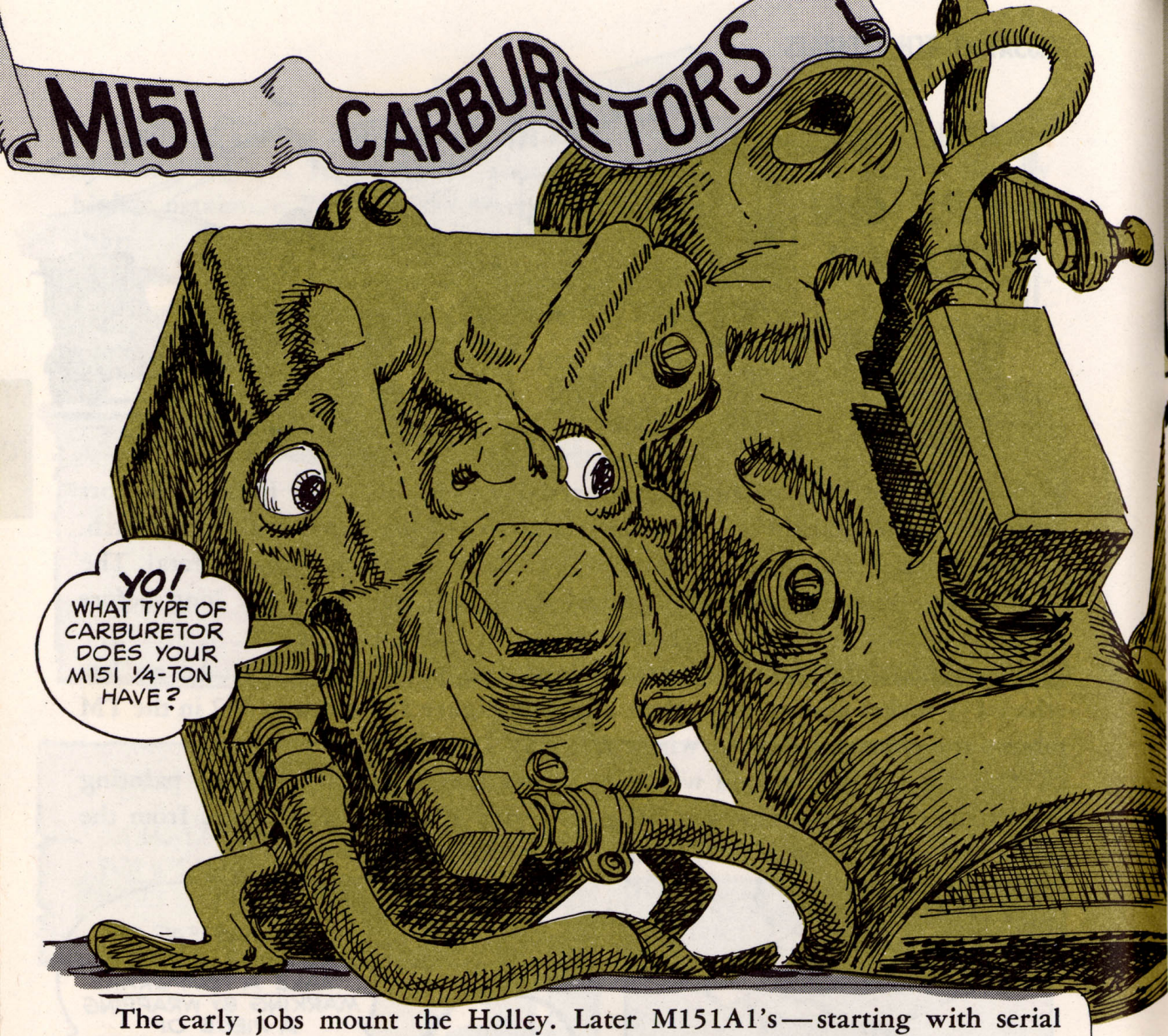
You can tell in a second whether the free travel is on the nose by painting two stripes across the clutch pedal shaft—one at exactly 1½ inches from the floor and the other at exactly 2 inches from the floor.



If you feel the pressure—when you press down on the pedal—either below the first line or above the second line, holler for an adjustment quick.

And another "clutch murderer" is the guy who takes off in second gear. First gear comes first—it's as simple as that.





The early jobs mount the Holley. Later M151A1's—starting with serial number 2G.0068—mount the Zenith.

Either one works OK until you get a replacement that's a different model from the one you had on your vehicle. When this happens it calls for a bit of fixing up to put 'em in order.

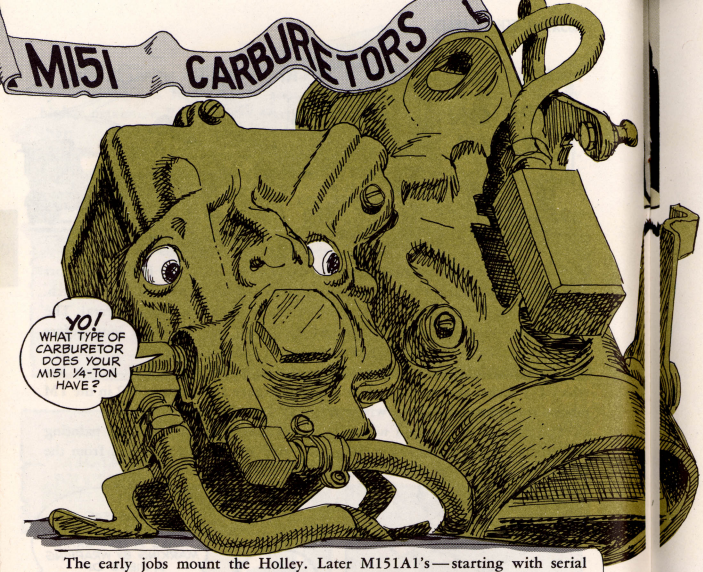
When you switch from the Zenith to a Holley there are several items you'll need to give the Holley a vent hose. If you happen to have another M151 around with the vent hose on it, you can use it as a guide.

Here're the parts, along with FSN's and supply pubs:

When replacing the Holley with a Zenith carburetor, the vent's not needed. The Zenith has its own internal venting system.

So discard the vent hose assembly and put Plug, FSN 4730-287-3281, into the hole in the air cleaner where the vent hose was hooked up. This plug's in C4730-IL-A (Jun 64).

To keep switching carburetors to a minimum, always requisition the one that goes on your M151 or M151A1.



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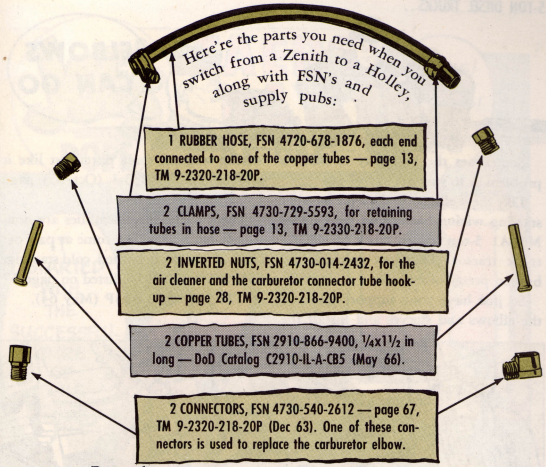
So discard the vent hose assembly and put Plug, FSN 4730-287-3281, into the hole in the air cleaner where the vent hose was hooked up. This plug's in C4730-IL-A (Jun 64).

To keep switching carburetors to a minimum, always requisition the one that goes on your M151 or M151A1.

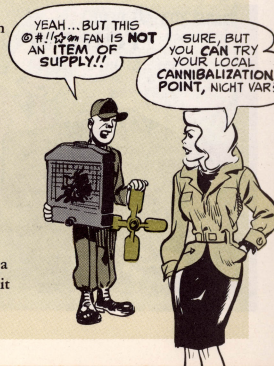


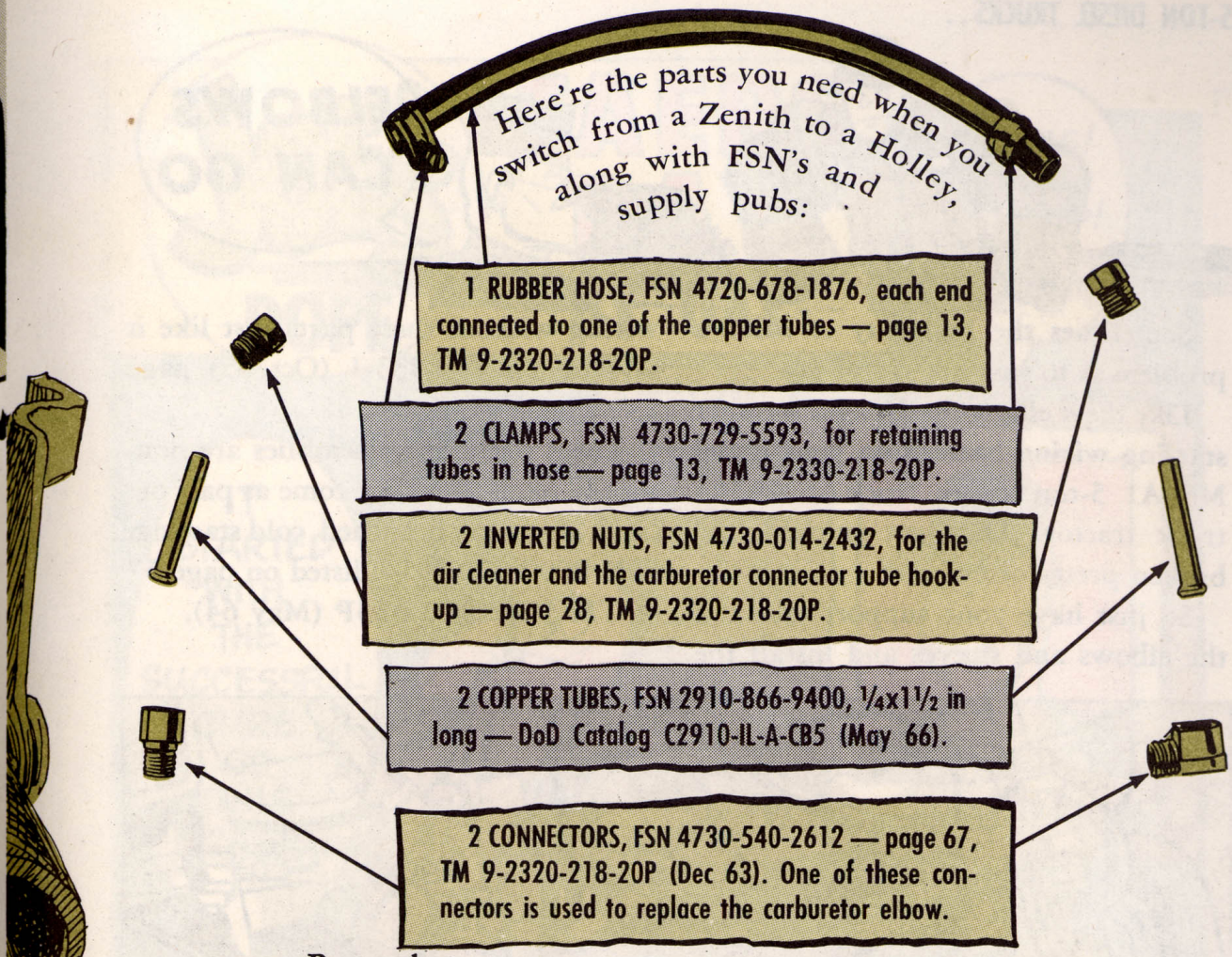
Remember to use—
FSN 2910-678-1857 for the Holley (Needs vent line).
FSN 2910-788-8457 for the Zenith (No vent line).

M151 FAN BLADE...

The radiator fan in your M151, M151A1, M151A1C or M718 ¼-ton truck might develop hairline cracks between the mounting bolts and rivets.

When the fan is at a standstill, if you spot even a tiny crack, trade it for a better one.



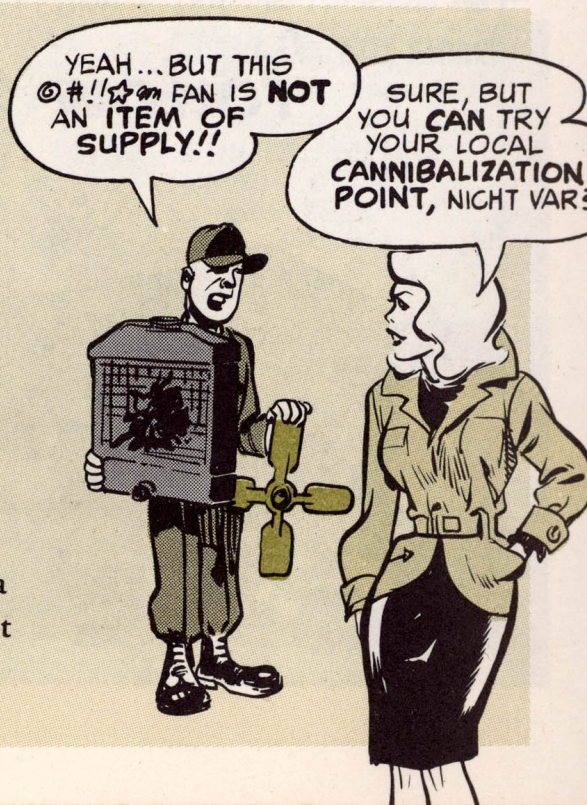


Remember to use—
FSN 2910-678-1857 for the Holley (Needs vent line).
FSN 2910-788-8457 for the Zenith (No vent line).

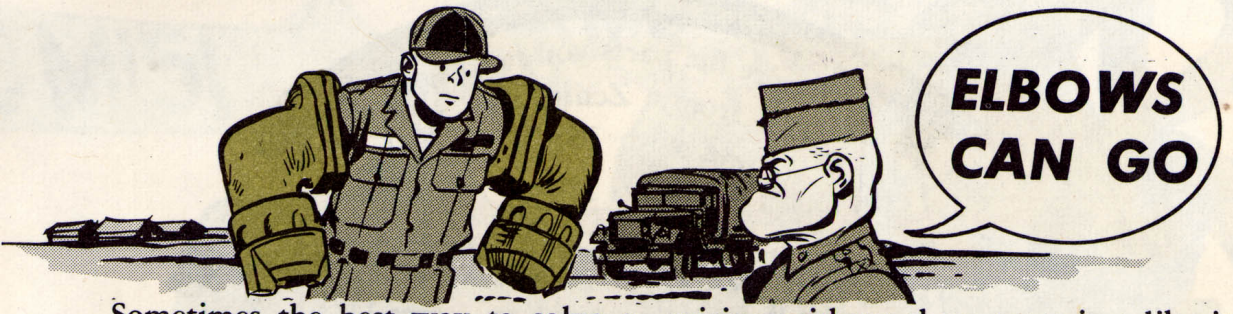
M151 FAN BLADE...

The radiator fan in your M151, M151A1, M151A1C or M718 1/4-ton truck might develop hairline cracks between the mounting bolts and rivets.

When the fan is at a standstill, if you spot even a tiny crack, trade it for a better one.



5-TON DIESEL TRUCKS . .



Sometimes the best way to solve a problem is to just get rid of it.

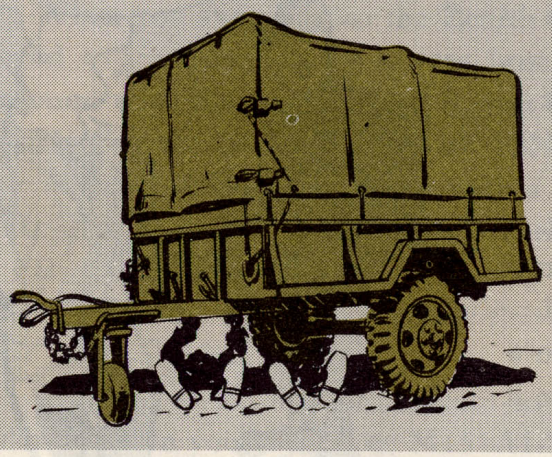
Like the 4 elbows in the cold weather starting wiring harness on your diesel M54A1 5-ton cargo truck or M52A1 truck tractor. They get cracked and broken pretty often.

So just have your support take out the elbows and sleeves and install the wiring without these parts just like it says in TB 750-933-1 (Oct 65) page 139.

These connector assemblies are non-supply items, but they come as part of: Lead, electrical, branched, cold starting, FSN 2590-972-2614, listed on page 57 of TM 9-2320-211-35P (May 64).

TRAILER LO'S ARE DEAD . . .

FOLLOW TM FOR LUBING

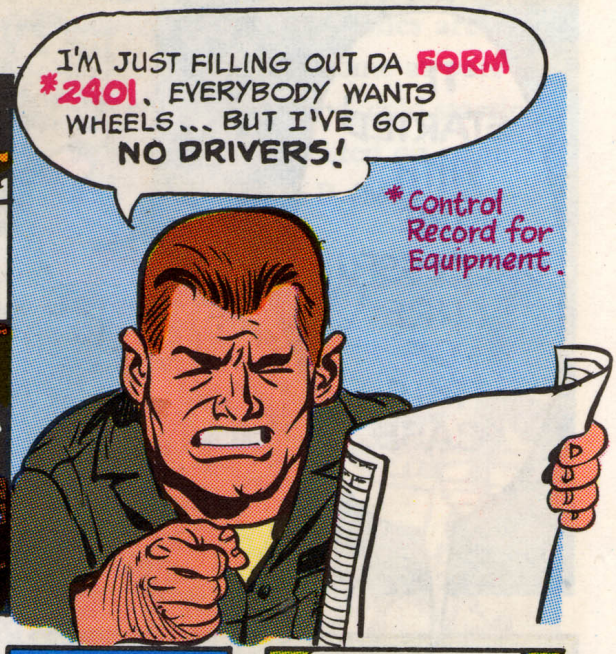


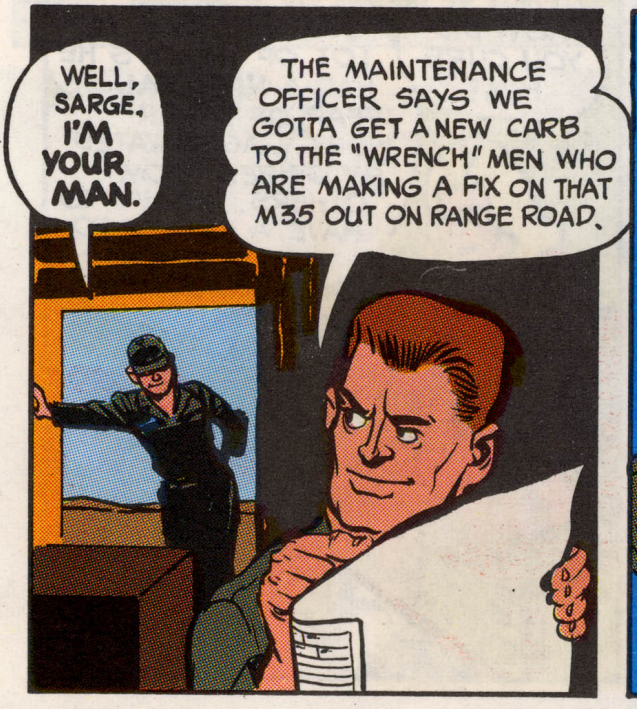
There's no lubrication order anymore for the M104 1½-ton cargo trailer, but the lube chart and other instructions in TM 9-2330-213-14 (Jan 64) will do just as well for the M104, the M106 water tank trailer and others in the G754-series.

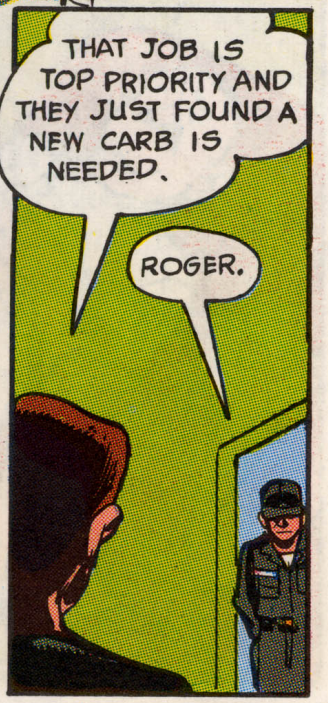
LO's for some other trailers have been rescinded too, so you use the lube instructions in their TM's. Among these other trailers are the M416 ¼-ton, M100 ¼-ton, M101 ¾-ton and M348A1 3-ton.

Joe's DOPE
TAERS DAY BY DAY
FORMS! FORMS! FORMS! FORMS! FOOEY!
CASE # 999
DRYVER, JOE
SYMPTOMS
"FORMAPHOBIA"
IT STARTED WITH THE SUCCESSFUL CURE OF THIS CASE.
HOW DID YOU CURE HIM?
SIMPLE... LIKE A LOT OF TROOPS HE HAD A NATURAL FEAR OF PAPER WORK... AGGRAVATED BY GRIPES FROM OTHERS... HE HAD TO HAVE A CHANCE TO SEE TAERS AT WORK!

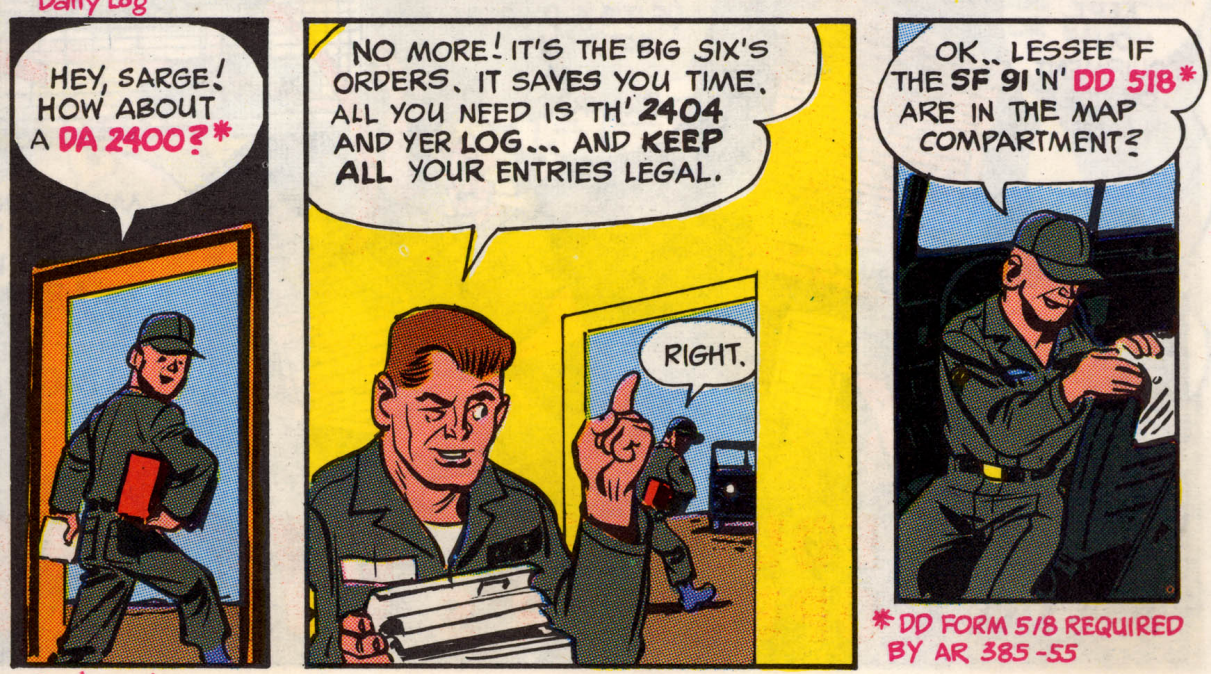
...AND THE FOLLOWING WEEK JOE STARTED.





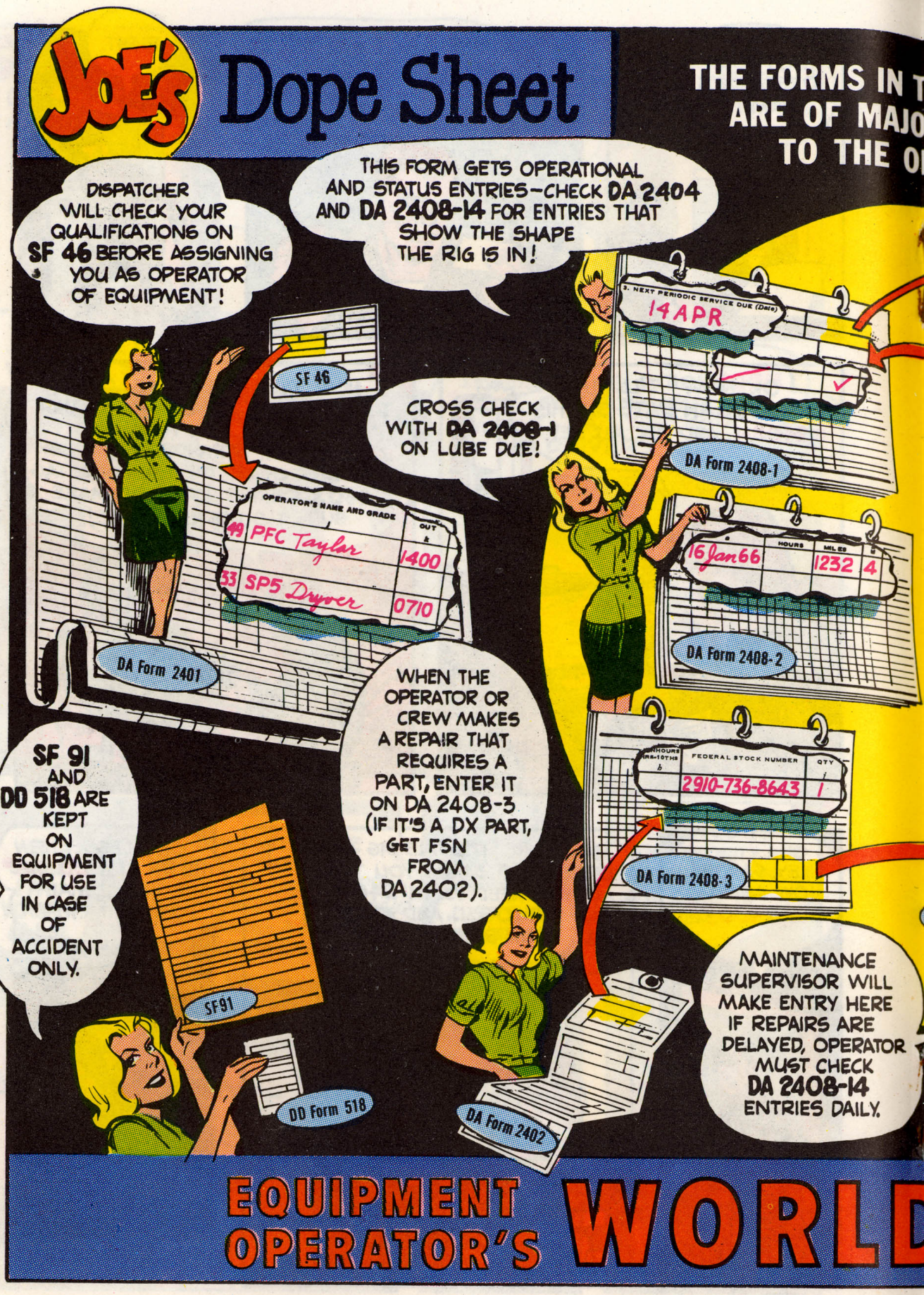


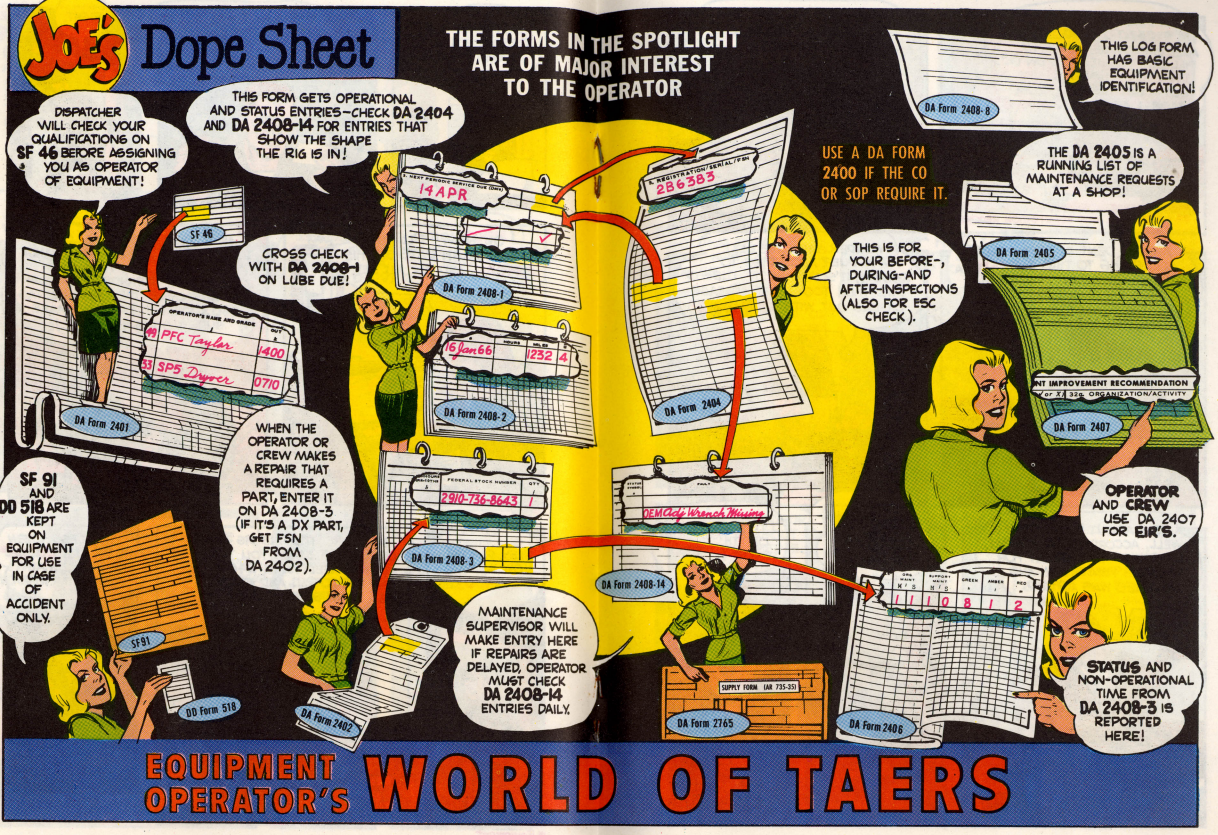
*Daily Log

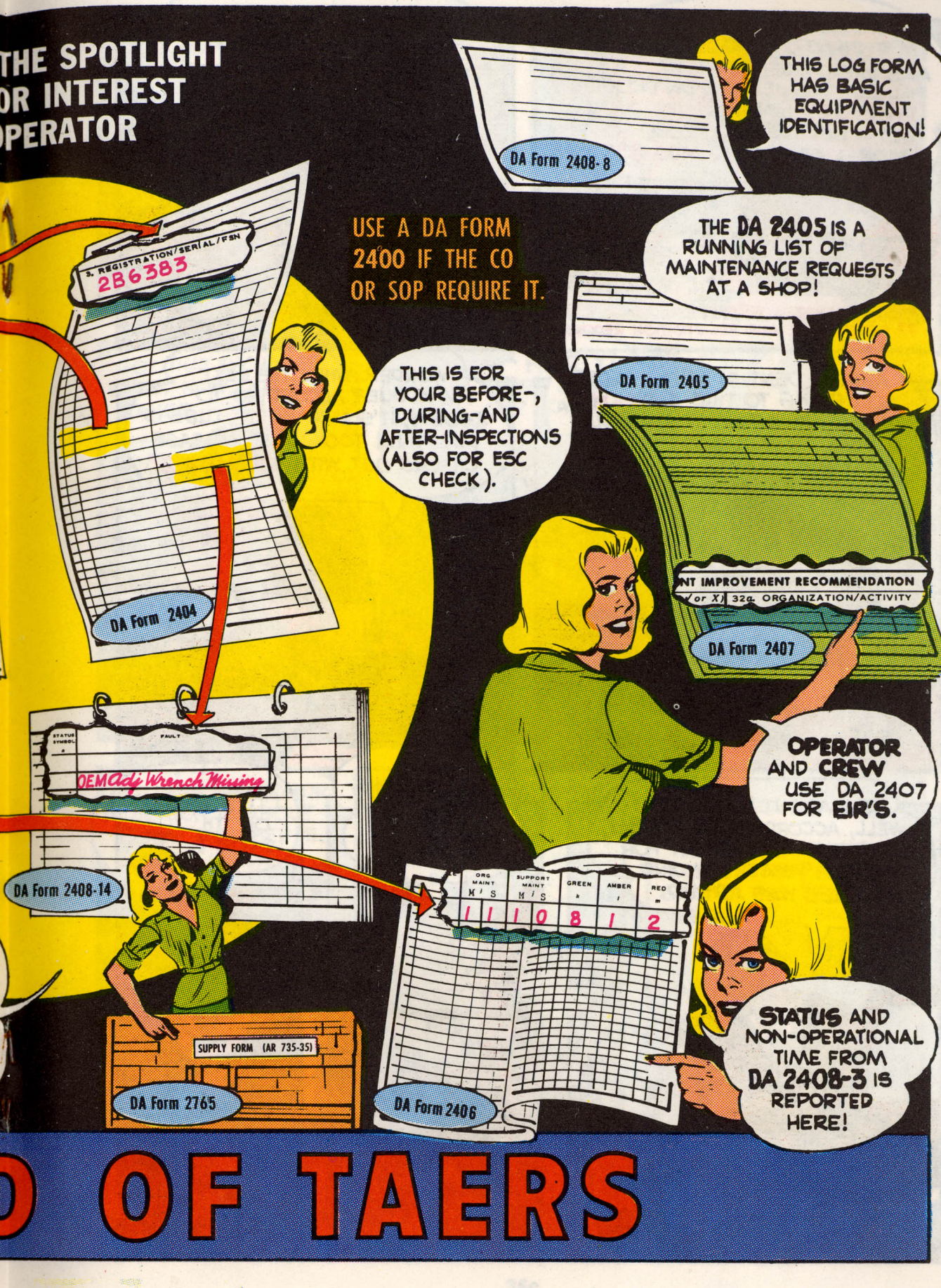


*Equipment Utilization Record

*DD FORM 518 REQUIRED BY AR 385-55


JOE'S
Dope Sheet
THE FORMS IN T
ARE OF MAJO
TO THE O
DISPATCHER WILL CHECK YOUR QUALIFICATIONS ON SF 46 BEFORE ASSIGNING YOU AS OPERATOR OF EQUIPMENT!
THIS FORM GETS OPERATIONAL AND STATUS ENTRIES—CHECK DA 2404 AND DA 2408-14 FOR ENTRIES THAT SHOW THE SHAPE THE RIG IS IN!
SF 46
CROSS CHECK WITH DA 2408-1 ON LUBE DUE!
3. NEXT PERIODIC SERVICE DUE (Date)
14 APR
DA Form 2408-1
OPERATOR'S NAME AND GRADE
OUT
49 PFC Taylor 1400
33 SP5 Dwyer 0710
DA Form 2401
HOURS
MILEAGE
16 Jan 66 1232 4
DA Form 2408-2
FEDERAL STOCK NUMBER
QTY
2910-736-8643 1
DA Form 2408-3
WHEN THE OPERATOR OR CREW MAKES A REPAIR THAT REQUIRES A PART, ENTER IT ON DA 2408-3 (IF IT'S A DX PART, GET FSN FROM DA 2402).
SF 91 AND DD 518 ARE KEPT ON EQUIPMENT FOR USE IN CASE OF ACCIDENT ONLY.
SF91
DD Form 518
DA Form 2402
MAINTENANCE SUPERVISOR WILL MAKE ENTRY HERE IF REPAIRS ARE DELAYED, OPERATOR MUST CHECK DA 2408-14 ENTRIES DAILY.
EQUIPMENT OPERATOR'S WORLD


JOE'S Dope Sheet
THE FORMS IN THE SPOTLIGHT ARE OF MAJOR INTEREST TO THE OPERATOR
DISPATCHER WILL CHECK YOUR QUALIFICATIONS ON SF 46 BEFORE ASSIGNING YOU AS OPERATOR OF EQUIPMENT!
THIS FORM GETS OPERATIONAL AND STATUS ENTRIES—CHECK DA 2404 AND DA 2408-14 FOR ENTRIES THAT SHOW THE SHAPE THE RIG IS IN!
SF 46
DA Form 2401
CROSS CHECK WITH DA 2408-1 ON LUBE DUE!
DA Form 2408-1
DA Form 2408-2
DA Form 2404
USE A DA FORM 2400 IF THE CO OR SOP REQUIRE IT.
THIS IS FOR YOUR BEFORE-, DURING-AND AFTER-INSPECTIONS (ALSO FOR ESC CHECK).
DA Form 2408-8
THIS LOG FORM HAS BASIC EQUIPMENT IDENTIFICATION!
THE DA 2405 IS A RUNNING LIST OF MAINTENANCE REQUESTS AT A SHOP!
DA Form 2405
DA Form 2407
OPERATOR AND CREW USE DA 2407 FOR EIR'S.
SF 91 AND DD 518 ARE KEPT ON EQUIPMENT FOR USE IN CASE OF ACCIDENT ONLY.
SF91
DD Form 518
WHEN THE OPERATOR OR CREW MAKES A REPAIR THAT REQUIRES A PART, ENTER IT ON DA 2408-3 (IF IT'S A DX PART, GET FSN FROM DA 2402).
DA Form 2402
DA Form 2408-3
MAINTENANCE SUPERVISOR WILL MAKE ENTRY HERE IF REPAIRS ARE DELAYED, OPERATOR MUST CHECK DA 2408-14 ENTRIES DAILY.
DA Form 2408-14
DA Form 2765
DA Form 2406
STATUS AND NON-OPERATIONAL TIME FROM DA 2408-3 IS REPORTED HERE!
EQUIPMENT OPERATOR'S WORLD OF TAERS


THE SPOTLIGHT
OR INTEREST
OPERATOR
DA Form 2408-8
THIS LOG FORM HAS BASIC EQUIPMENT IDENTIFICATION!
USE A DA FORM 2400 IF THE CO OR SOP REQUIRE IT.
THE DA 2405 IS A RUNNING LIST OF MAINTENANCE REQUESTS AT A SHOP!
DA Form 2405
3. REGISTRATION/SERIAL/FSN
286383
DA Form 2404
THIS IS FOR YOUR BEFORE-, DURING-AND AFTER-INSPECTIONS (ALSO FOR ESC CHECK).
NT IMPROVEMENT RECOMMENDATION
(√ or X) 32a. ORGANIZATION/ACTIVITY
DA Form 2407
OPERATOR AND CREW USE DA 2407 FOR EIR'S.
STATUS SYMBOL
FAULT
OEM Adj Wrench Missing
DA Form 2408-14
ORG MAINT M/S
SUPPORT MAINT M/S
GREEN
AMBER
RED
1 1 1 0 8 1 2
SUPPLY FORM (AR 735-35)
DA Form 2765
DA Form 2406
STATUS AND NON-OPERATIONAL TIME FROM DA 2408-3 IS REPORTED HERE!
D OF TAERS

YUP! ALL HERE... EVEN TM 9-2320-218-10... THINGS ARE IMPROVING! TIME TO FILL OUT THE HEADING ON OL' DA 2404.* HMMM... GOTTA GET THE INFO FROM 2408-1 AND CHECK 2408-8.**
* MAINTENANCE WORKSHEET
** ACCEPTANCE AND REGISTRATION RECORD
HERE Y'GO! ALL SET... NOW FOR BEFORE-OPERATION EYE-BALLING!
AHAH... DENT IN TH' OL' FENDER! ACCORDING TO THIS 2408-14* THEY KNOW ABOUT IT AND ARE GONNA FIX IT DURING THE NEXT PM.
* UNCORRECTED FAULT RECORD
WONDER WHEN THE NEXT PM IS DUE? ACCORDING TO 2408-1, IT'S NEXT WEEK. LUBE IS DUE THEN TOO... YUP! MILEAGE CHECKS OUT WITH DA 2408-2.*
* EQUIPMENT LUBE RECORD
HOW ABOUT "GO-JUICE"? WELL, ACCORDING TO 2408-1, THIS BOMB WAS DRIVEN FOR 50 MILES YESTERDAY, AND NO FUEL WAS ADDED.
FOUR GALLONS, PLEASE. 'N' CLEAN TH' WINDSHIELD.
I'LL NOTE THIS ON TH' 2408-1.

ALL SET! OFF TO DX SUPPLY TO SAVE TH' DAY!
DX SUPPLY
GOT THAT EXCHANGE CARB. NOW, OUT TO RANGE ROAD.
FINALLY! HERE COMES OUR CARB.
SEE YA AT CHOW MEN.
?!!?
BATTERY-GENERATOR INDICATOR IS ABOUT TO FLIP ITS NEEDLE. BETTER CHECK!
WELL, ACCORDING TO THE TM, AND WOT I SEE, IT'S A LOOSE BATTERY CABLE, AND ME WITH NO WRENCH IN TH' OEM.
LUCKY THAT COMMO TRUCK PASSED AND LENT ME THIS WRENCH! THERE! THAT SHOULD DO IT.

NO PART WAS USED, SO NO ENTRY IS NEEDED ON 2408-3.* BUT I'LL NOTE THIS MISSING WRENCH ON 2404.
*MAINTENANCE RECORD
BACK AT THE MOTOR PARK
FINE! I'LL TRANSFER THAT WRENCH ENTRY ON TO 2408-14 IN THE LOG. THEN ASK THE SUPPLY CLERK FOR THE NUMBER FROM THE PRE-PRINTED 2765 REQUISITION FOR THE WRENCH AND ENTER THE NUMBER ON 2408-14.
HEY, SARGE! I FIGURE TH' BATTERY COVER ON THAT M151 COULDA BEEN DESIGNED BETTER. IT'S ROUGH WORKING ON THAT BATTERY AS IT IS.
IF YOU THINK YOU GOT A BETTER IDEA, PUT IT ON A 2407 AS AN EIR.
OUT ON RANGE ROAD
WHEW! ALL FINISHED, HARRY.
GREAT! FINISH WRITING UP THAT DA 2408-3 AND WE'LL BLOW!
HEY! HOW ABOUT THE 2408-10.*
*COMPONENT REGISTER
FERGET IT! ONLY MAJOR COMPONENT CHANGES ARE RECORDED ON 2408-10, AND SINCE CHANGE 2 OF TM 38-750, WE DON'T LIST COMPONENTS ON 2408-7.*
*EQUIPMENT TRANSFER REPORT
SO HE WAS CURED! HOW DOES THAT BRING YOU TO THIS SORRY STATE?
I'M...SOB...CHOKE...* S-SCARED OF THE PAPER WORK I'LL HAVE TO DO IN CONNECTION WITH THIS CASE!!

INVENTORY YOUR SURVIVAL KITS TO . . .

BRING 'EM BACK ALIVE

Anytime a pilot pokes the nose of his bird into the wide blue, headed for unknown or unfriendly territory, he's sure to tote along survival kits — just in case!!

WHO GETS THE KITS?

Survival equipment is called for whenever you're heading over water, into the desert, jungle or the arctic. That's the word in AR 95-1 (6 Mar 64), Army Aviation — General Provisions . . . sect IV, para 28 on emergency equipment.

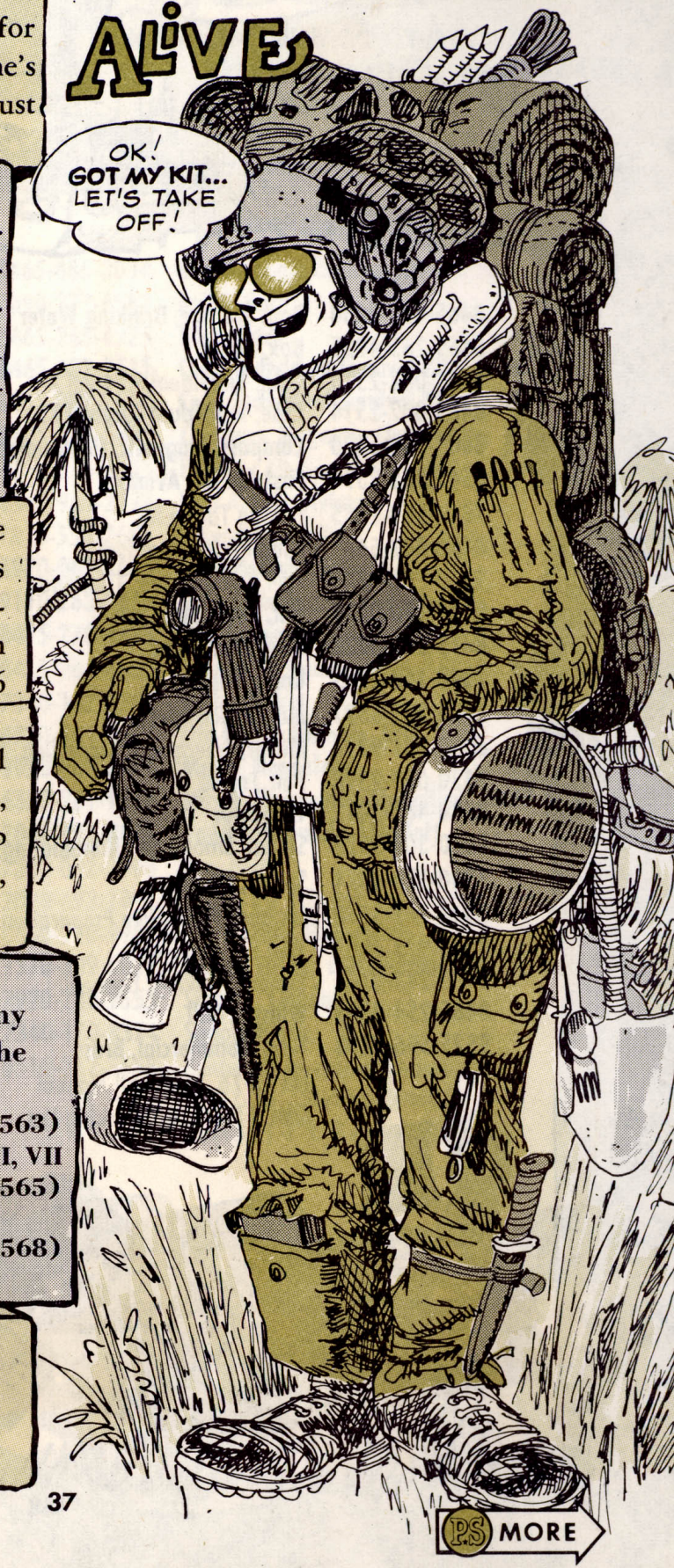
For many a moon, air-types have been scrounging bits and pieces here and there to make up individual survival kits, as suggested in Change 2 (23 Jul 64) to FM 21-76 on survival.

So, it figures that the individual survival kits, authorized in Part 4, Section 1B of TA 50-901 (24 Sep 63) on clothing and equipment, would make the grade.

SB 700-20 (8 Dec 65) on Army adopted items of materiel lists the kits as follows.

Line item No. U72412 – (Formerly 561563)
Survival kit, cold climate – zones IV, V, VI, VII
Line item No. U72549 – (Formerly 561565)
Survival kit, hot climate – zones I, II, III
Line item No. U72686 – (Formerly 561568)
Survival kit, overwater – all zones

You'll find the kits you want are now listed in Federal Supply Catalog C8440/70-IL-A (1 Dec 65) on Pages 105 and 106.



PS MORE

HOT CLIMATE KIT

FSN 8465-973-1861 ($86)

SURVIVAL KIT, INDIVIDUAL, with legend "SURVIVAL KIT, HOT CLIMATE", furnished with case, MIL-S-43302 (GL), has these components:

FSN		Qty
8465-485-3034	Bag, Storage, Drinking Water	1
8465-265-4925	Box, Match	1
8465-082-2513	Case, Individual Survival Kit	1
8465-082-2514	Case, Individual Survival Kit	1
6605-348-5820	Compass, Magnetic, Unmounted	1
6545-965-2394	First Aid Kit, Aviator	1
7810-558-2685	Fishing Tackle Kit	1
8970-082-5665	Food Packet, Survival	6
9110-263-9865	Fuel, Compressed, Trioxane (box)	1
8415-270-0229	Hat, Reversible, Sun	1
8415-261-6630	Insect Net, Head	1
7340-162-2205	Knife, Pocket	1
9920-985-6891	Match, Nonsafety (boxes)	3
6350-261-9216	Mirror, Emergency, Signalling, MK3	1
7330-082-2398	Pan, Frying	1
8340-485-3012	Tarpaulin	1
1370-309-5028	Signal, Smoke and Illuminating, Marine	2
7340-170-8374	Spoon, Picnic	1
8510-162-5658	Sunburn Preventive Preparation	1
8465-973-4807	Tool Kit, Survival	1
8960-243-2103	Water, Drinking, Canned	12
8465-254-8803	Whistle, Ball	1
9525-596-3498	Wire, Commercial, Brass	1
	FM 21-76 Survival Manual	1
	QMC 11-1-168 Packing List	1

FSN

8465-485-3034
8465-265-4925
6260-299-5689
8465-082-2512
8465-082-2514
6605-348-5820
6545-965-2394
7810-558-2685
8970-082-5665
9110-263-9865
8415 261-6630
7340-162-2205
9920-889-3367
6350-261-9216
7330-082-2398
8405-290-0550
5110-212-1560
1370-309-5028
8465-753-3226
7340-170-8374
9525-596-3498

HOT CLIMATE KIT
FSN 8465-973-1861 ($86)

SURVIVAL KIT, INDIVIDUAL, with legend "SURVIVAL KIT, HOT CLIMATE", furnished with case, MIL-S-43302 (GL), has these components:

FSN		Qty
8465-485-3034	Bag, Storage, Drinking Water	1
8465-265-4925	Box, Match	1
8465-082-2513	Case, Individual Survival Kit	1
8465-082-2514	Case, Individual Survival Kit	1
6605-348-5820	Compass, Magnetic, Unmounted	1
6545-965-2394	First Aid Kit, Aviator	1
7810-558-2685	Fishing Tackle Kit	1
8970-082-5665	Food Packet, Survival	6
9110-263-9865	Fuel, Compressed, Trioxane (box)	1
8415-270-0229	Hat, Reversible, Sun	1
8415-261-6630	Insect Net, Head	1
7340-162-2205	Knife, Pocket	1
9920-985-6891	Match, Nonsafety (boxes)	3
6350-261-9216	Mirror, Emergency, Signalling, MK3	1
7330-082-2398	Pan, Frying	1
8340-485-3012	Tarpaulin	1
1370-309-5028	Signal, Smoke and Illuminating, Marine	2
7340-170-8374	Spoon, Picnic	1
8510-162-5658	Sunburn Preventive Preparation	1
8465-973-4807	Tool Kit, Survival	1
8960-243-2103	Water, Drinking, Canned	12
8465-254-8803	Whistle, Ball	1
9525-596-3498	Wire, Commercial, Brass	1
	FM 21-76 Survival Manual	1
	QMC 11-1-168 Packing List	1

COLD CLIMATE KIT
FSN 8465-973-1862 ($133)

SURVIVAL KIT, INDIVIDUAL, with legend "COLD CLIMATE", furnished with case, Quartermaster Corps LP/P .DES 24-62, has these components:

FSN		Qty
8465-485-3034	Bag, Storage, Drinking Water	1
8465-265-4925	Box, Match	1
6260-299-5689	Candle, Illuminating	5
8465-082-2512	Case, Individual Survival Kit	1
8465-082-2514	Case, Individual Survival Kit	1
6605-348-5820	Compass, Magnetic, Unmounted	1
6545-965-2394	First Aid Kit, Aviator	1
7810-558-2685	Fishing Tackle Kit	1
8970-082-5665	Food Packet, Survival	7
9110-263-9865	Fuel, Compressed, Trioxane	3
8415 261-6630	Hat and Mosquito Net	1
7340-162-2205	Knife, Pocket	1
9920-889-3367	Match, Nonsafety (boxes)	3
6350-261-9216	Mirror, Emergency Signalling	1
7330-082-2398	Pan, Frying	1
8405-290-0550	Poncho	1
5110-212-1560	Saw-Knife-Shovel Assy	1
1370-309-5028	Signal, Smoke and Illumination, Marine	2
8465-753-3226	Sleeping Bag	1
7340-170-8374	Spoon, Picnic	1
9525-596-3498	Wire, Commercial Brass	1
	FM 21-76 Survival Manual	1
	QMC 11-1-170 Packing List	1

OVER-WATER KIT
FSN 8465-973-1863 ($164)

SURVIVAL KIT, INDIVIDUAL, with legend "SURVIVAL KIT, OVERWATER", furnished with case, MIL-S-43301 (GL), has these components:

FSN		Qty
8465-485-3034	Bag, Storage, Drinking Water	1
2090-277-6583	Bailer, Boat	1
8465-265-4925	Box, Match	1
8465-082-2511	Case, Individual Survival Kit	1
8465-082-2514	Case, Individual Survival Kit	1
6605-348-5820	Compass, Magnetic, Unmounted	1
4220-216-5031	Desalter Kit, Sea Water, MK2	3
6545-965-2394	First Aid Kit, Aviator	1
7810-558-2685	Fishing Tackle Kit	1
8970-082-5665	Food Packet, Survival	3
9110-263-9865	Fuel, Compressed, Trioxane	3
8415-270-0229	Hat, Reversible, Sun	1
8415-261-6630	Insect Net, Head	1
7340-162-2205	Knife, Pocket	1
4220-541-0872	Life Raft, Inflatable, MB4	1
9920-985-6891	Match, Nonsafety (boxes)	3
6350-261-9216	Mirror, Emergency, Signalling, MK3	1
2040-485-3018	Paddle Assembly, Life Raft	2
7330-082-2398	Pan, Frying	1
2090-693-1471	Repair Kit, Life Raft	1
6850-270-9986	Sea Marker, Fluorescein	2
1370-309-5028	Signal, Smoke and Illuminating, Marine	2
7920-240-2555	Sponge, Cellulose	1
7340-170-8374	Spoon, Picnic	1
8510-162-5658	Sunburn Preventive Preparation	1
	FM 21-76 Survival Manual	1
	NLABS 11-1-172 Packing List	1

MORE

COLD CLIMATE KIT
FSN 8465-973-1862 ($133)

SURVIVAL KIT, INDIVIDUAL, with legend "COLD CLIMATE", furnished with case, Quartermaster Corps LP/P DES 24-62, has these components:

		Qty
	Bag, Storage, Drinking Water	1
	Box, Match	1
	Candle, Illuminating	5
	Case, Individual Survival Kit	1
	Case, Individual Survival Kit	1
	Compass, Magnetic, Unmounted	1
	First Aid Kit, Aviator	1
	Fishing Tackle Kit	1
	Food Packet, Survival	7
	Fuel, Compressed, Trioxane	3
	Hat and Mosquito Net	1
	Knife, Pocket	1
	Match, Nonsafety (boxes)	3
	Mirror, Emergency Signalling	1
	Pan, Frying	1
	Poncho	1
	Saw-Knife-Shovel Assy	1
	Signal, Smoke and Illumination, Marine	2
	Sleeping Bag	1
	Spoon, Picnic	1
	Wire, Commercial Brass	1
	FM 21-76 Survival Manual	1
	QMC 11-1-170 Packing List	1

OVER-WATER KIT
FSN 8465-973-1863 ($164)

SURVIVAL KIT, INDIVIDUAL, with legend "SURVIVAL KIT, OVERWATER", furnished with case, MIL-S-43301 (GL), has these components:

FSN		Qty
8465-485-3034	Bag, Storage, Drinking Water	1
2090-277-6583	Bailer, Boat	1
8465-265-4925	Box, Match	1
8465-082-2511	Case, Individual Survival Kit	1
8465-082-2514	Case, Individual Survival Kit	1
6605-348-5820	Compass, Magnetic, Unmounted	1
4220-216-5031	Desalter Kit, Sea Water, MK2	3
6545-965-2394	First Aid Kit, Aviator	1
7810-558-2685	Fishing Tackle Kit	1
8970-082-5665	Food Packet, Survival	3
9110-263-9865	Fuel, Compressed, Trioxane	3
8415-270-0229	Hat, Reversible, Sun	1
8415-261-6630	Insect Net, Head	1
7340-162-2205	Knife, Pocket	1
4220-541-0872	Life Raft, Inflatable, MB4	1
9920-985-6891	Match, Nonsafety (boxes)	3
6350-261-9216	Mirror, Emergency, Signalling, MK3	1
2040-485-3018	Paddle Assembly, Life Raft	2
7330-082-2398	Pan, Frying	1
2090-693-1471	Repair Kit, Life Raft	1
6850-270-9986	Sea Marker, Fluorescein	2
1370-309-5028	Signal, Smoke and Illuminating, Marine	2
7920-240-2555	Sponge, Cellulose	1
7340-170-8374	Spoon, Picnic	1
8510-162-5658	Sunburn Preventive Preparation	1
	FM 21-76 Survival Manual	1
	NLABS 11-1-172 Packing List	1

PS MORE

CHECK 'EM OFF

The individual survival kits should be kept with parachutes, life vests and other flight gear in a dry, clean room. Since the contents of these kits are not in everyday use, the only maintenance needed, to make sure a downed air-type has everything going for him, is an inventory.

There is no set time for the inventory. A commanding officer may assign an inspector to make a monthly, quarterly, semi-annual or annual check—depending on the climate. No TM 38-750 record-keeping is needed on this specialized gear.

Should the CO decide he wants extra equipment packed into the kits, such as an AN/URC-4 or -10, -11, or -14 survival radios, the inventory would probably be on a monthly basis to make sure the radio battery was up to snuff.

CHECKING OVER-WATER KIT BY THE NUMBERS

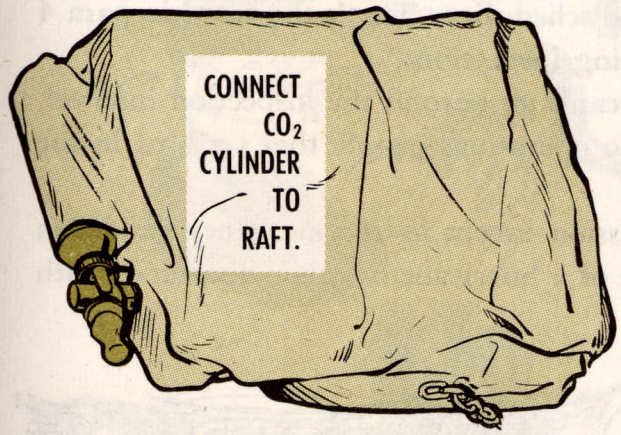
SEPARATE TOP AND BOTTOM LAYERS

SPREAD OUT ITEMS AND CHECK OFF AGAINST PACKING LIST

If you wind up with 27 of the right items nobody's been tampering with the kit. If you're short an item remember that you can requisition all the components without going all-out for a new kit.

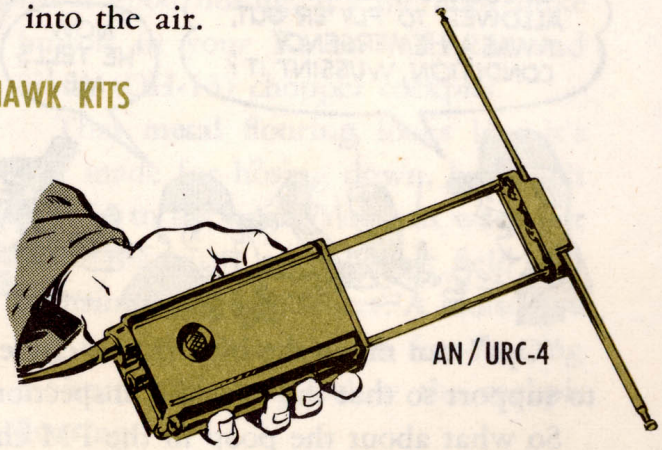
Actually, the only inspection needed on the items in these kits is on the aviator first aid kit. Just like TB AVN 10 (19 May 65) calls for an annual check by the medics on the airplane first aid kit, the same check should be made on the survival first aid kit.

WATCH THAT BOTTLE



Make doggone sure your CO_2 bottle for the one-man inflatable life raft is sealed. If not, chances are you've got no CO_2. . . and no inflation for your life raft. It never needs a pressure test. Also, make sure the cylinder is connected to the raft so the CO_2 will go into the raft when you want to float. It gives you an uneasy feeling to be out in the water with your raft and the CO_2 shoots off into the air.

EYE MOHAWK KITS

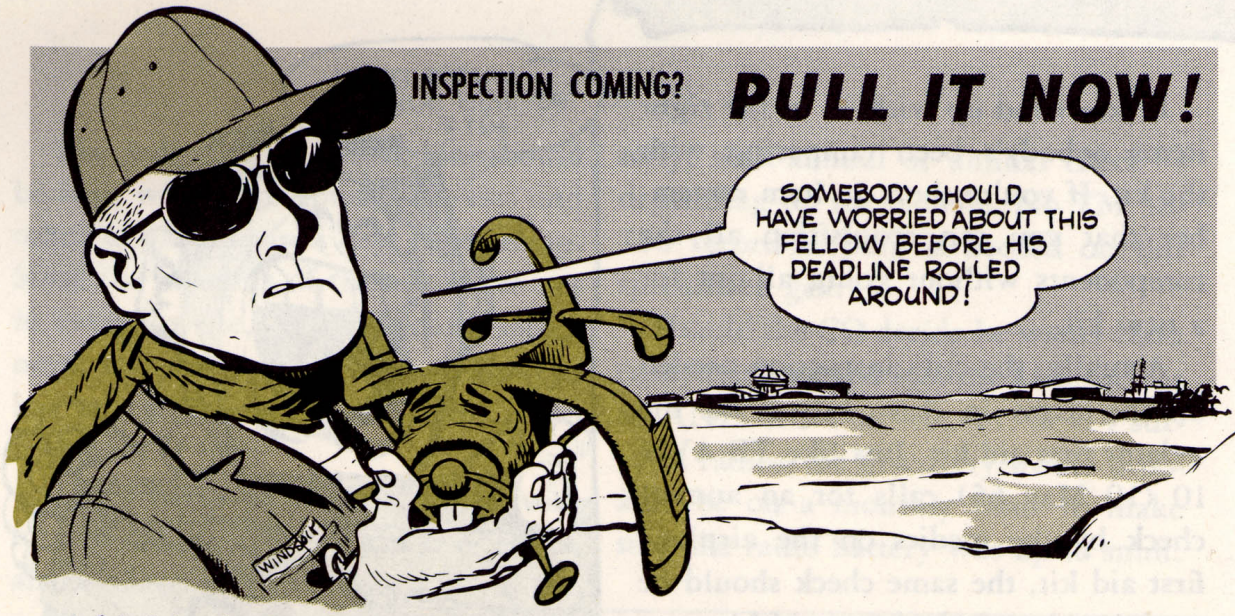


The three basic survival kits, usually attached to the parachute harness, can be carried aboard all aircraft with one exception—the Mohawk (OV-1).

The Mohawk kits are packed into the ejection seat and they can include an AN/URC-4 or -10, -11 or -14 survival radio. The cold climate kit carries—FSN 8465-782-3003, the hot climate kit—FSN 8465-965-4701, the overwater kit—FSN 8465-965-4702.

A packing list is also in each kit, which is inventoried in the same manner as the basic kit.

PS END



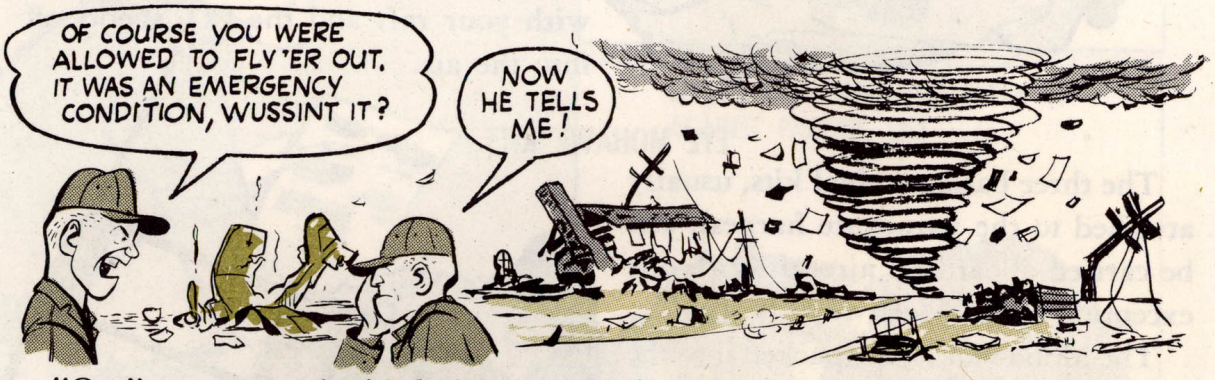
A bird in the hand is worth 2 in the bush, anytime.

'Course any bird on hand is up-to-snuff on preventive maintenance inspections, sure as shootin'. Those birds in the bush should be so lucky.

And yet there's no trick to seeing that all your aircraft get their PMI and PMP checks before the hourly deadline rolls 'round. All it takes to see that intervals **are not** exceeded is a little planning and scheduling. That's the word in para 4 of TB AVN 23-67 (11 Feb 65) on pulling inspections.

Para 3c of the TB also says that you can't go beyond the inspection interval. This could mean grounding the bird. To operations people that's a bird in the bush, for real.

That aircraft can't be flown on a mission except in an emergency condition such as combat or evacuation in the face of a hurricane or other disaster—with one exception.



"Ops" can move the bird if you circle the red X for—say—a one-time flight to support so that the over-due inspection can be made.

So what about the poop in the PM checksheets that says the bird **should not** be flown over the time limit—doesn't that give "ops" some leeway?

Negative! The words **should not** take care of the one-time flight and emergency deal when, come yell or high water, you beat the bushes and scramble those birds.

Yessir-e-e . . . pulling an inspection before time runs out is planning, man. The type called for in FM 1-10 (20 Sep 65) on organizational maintenance.

Chap 7, sec II, para 7-6 gives crew chiefs and mechanics the green light to make up a status chart which shows at a glance the hours on each bird to date and the hours to go before an Intermediate or Periodic is due.

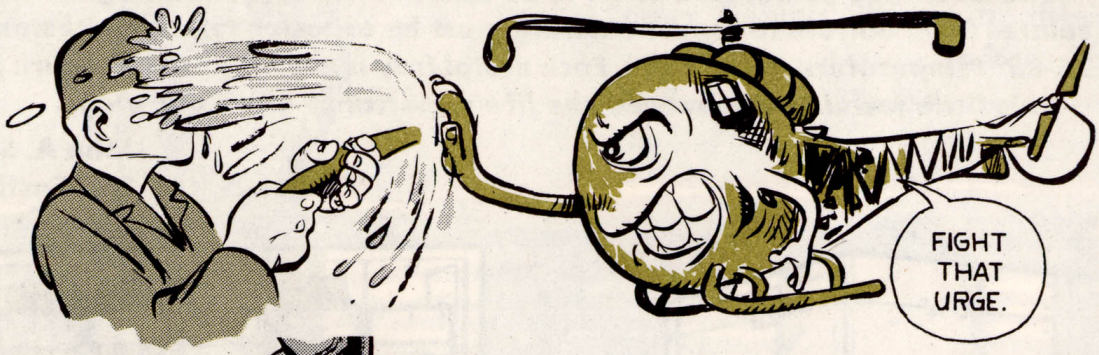
The chart will help prevent unscheduled grounding of aircraft, so use it wisely. Don't crowd yourself by flying down to the last few minutes before pulling an inspection. Give yourself an hour-or-so leeway.

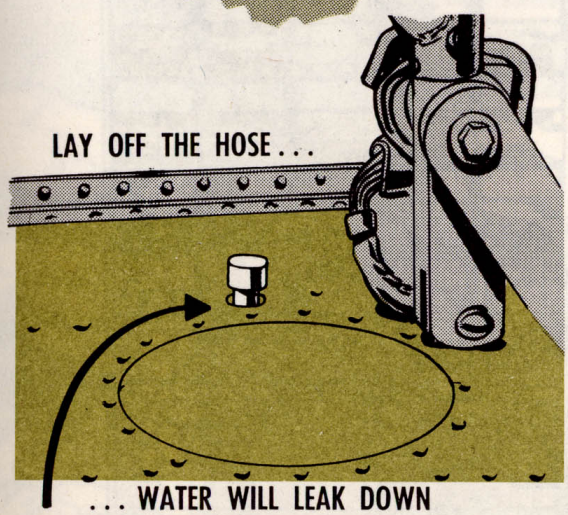
Unscheduled groundings can throw a monkey wrench into the maintenance works by changing schedules and adding to the downtime of aircraft.

So, whether your chart has fancy lettering or is just written on a blackboard, be sure you record the hour and status changes on each bird (taken from the DA Form 2408-13) every day.

With an accurate chart your inspections will be pulled on time and your birds'll be on hand . . . not in the bush.

WET MIKE BUTTONS DON'T COMMO





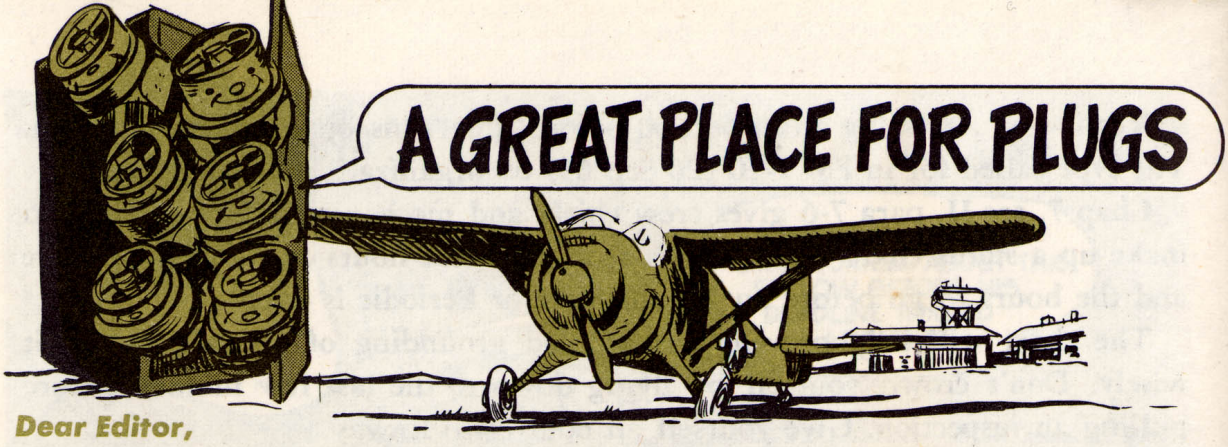
. . . WATER WILL LEAK DOWN AND SHORT OUT SWITCH.

If ever a commo switch was begging for a good hosing, it's the floor mike button in your Raven (OH-23) and Sioux (OH-13) chopper cockpits.

That metal flooring looks like it's just made for hosing down, but don't give in to the urge. You can wash out more than just good honest field dirt by using too much water. A moistened rag is fine, but too much free-flowing moisture will seep below the cockpit flooring.

Next thing you know you've got a shorted-out floor switch and your favorite fly types have to rely strictly on the cyclic trigger switch for their commo circuit contacts.

Good grief!



A GREAT PLACE FOR PLUGS

Dear Editor,

Any mechanic worth his salt knows that moisture-caused rust and corrosion between the ceramic and metallic electrodes of a spark plug can shorten the life of the plug. This is a real problem when you're working in a moisture-laden jungle.

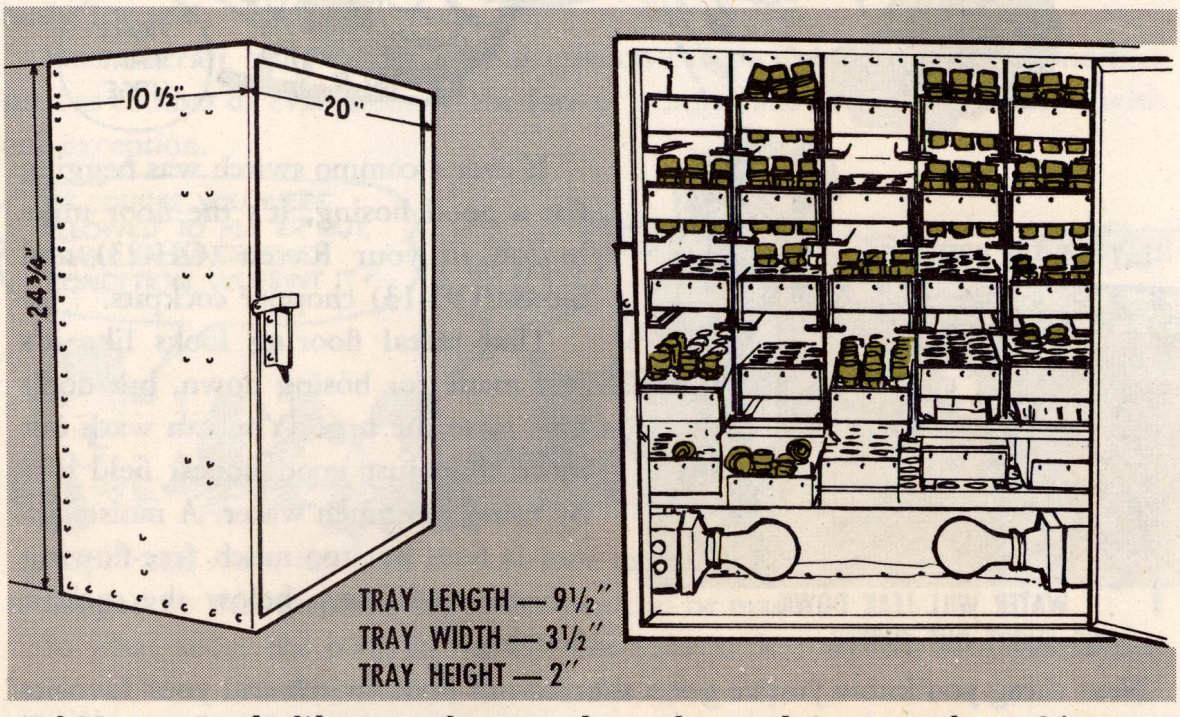
To stop this, you need to find a temporary place for plugs removed from an engine . . . a place where the temperature is even and moisture can't form.

Well, here's a handy-dandy little spark plug oven that fills the bill. Not only does it give you a uniform temperature but it gives you a place to keep all plugs so they don't get man-handled. You know what they say . . . "a dropped plug usually means a shot plug."

The oven has perforated shelves so heat from two 40-watt light bulbs circulates from bottom to top. The wiring must be asbestos type to withstand the 75-85° temperature in the oven. Each metal tray is made to hold 18 spark plugs.

This little jewel has increased the life expectancy of all our plugs.

John A. Setelin
Fort Eustis, Va.



(Ed Note—Looks like a good way to keep the spark in your plugs. Of course, the oven wiring should be done by qualified personnel to make sure it's in line with safety and fire regulations.)

FIREPOWER

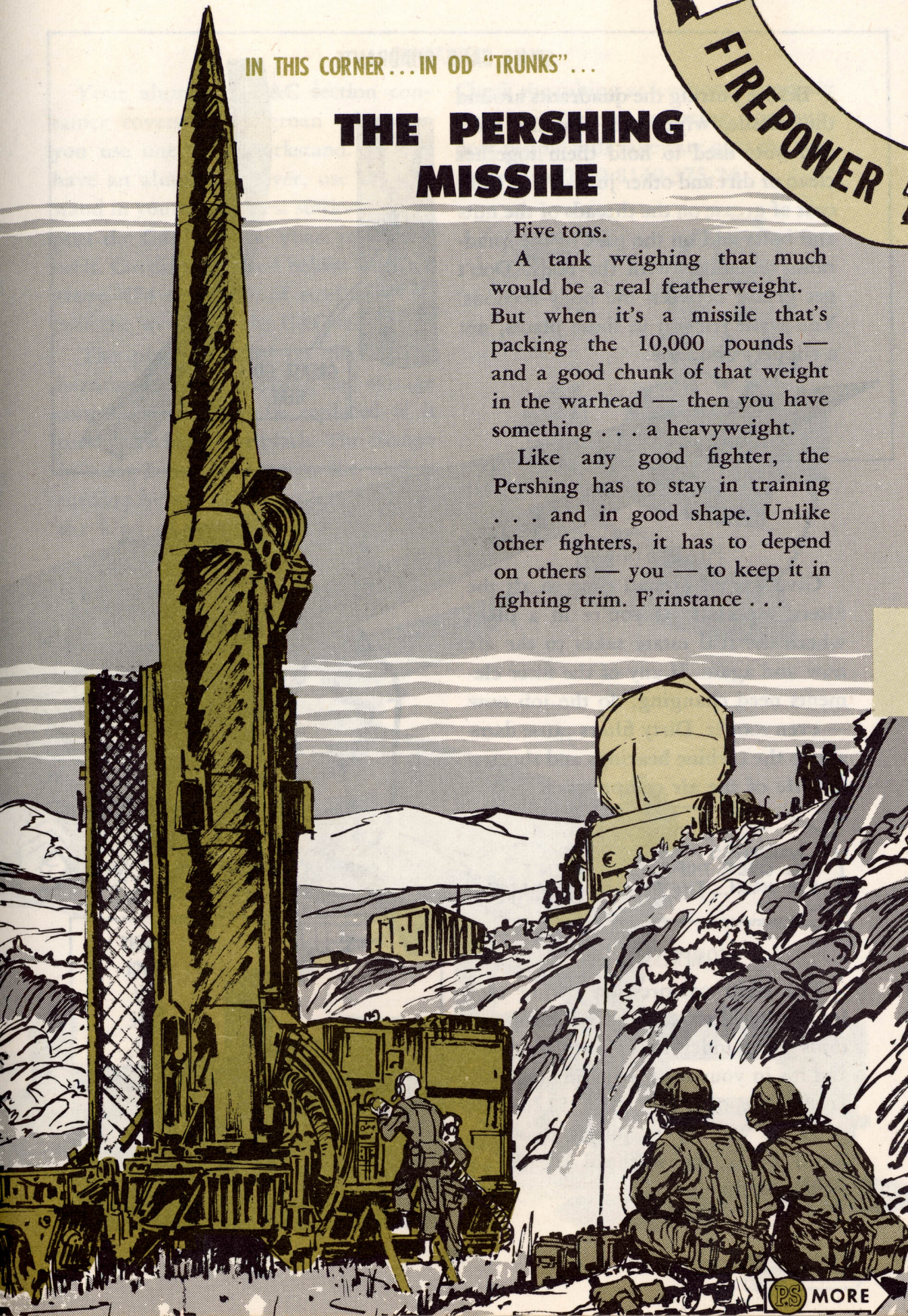
IN THIS CORNER . . . IN OD "TRUNKS" . . .

THE PERSHING MISSILE

Five tons.

A tank weighing that much would be a real featherweight. But when it's a missile that's packing the 10,000 pounds — and a good chunk of that weight in the warhead — then you have something . . . a heavyweight.

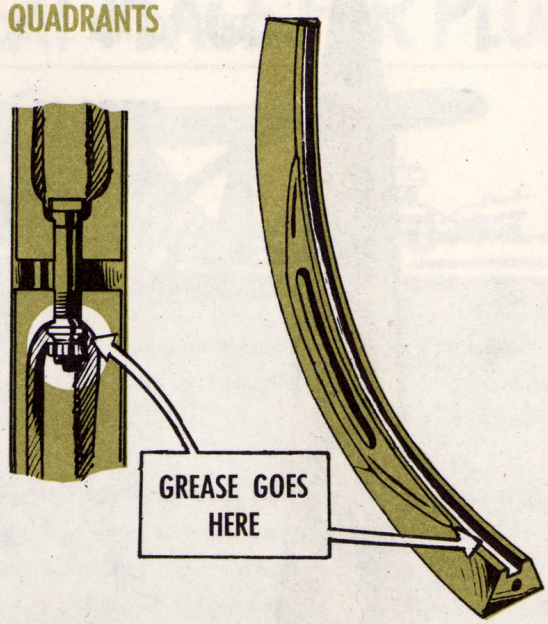
Like any good fighter, the Pershing has to stay in training . . . and in good shape. Unlike other fighters, it has to depend on others — you — to keep it in fighting trim. F'rinstance . . .



P.S. MORE

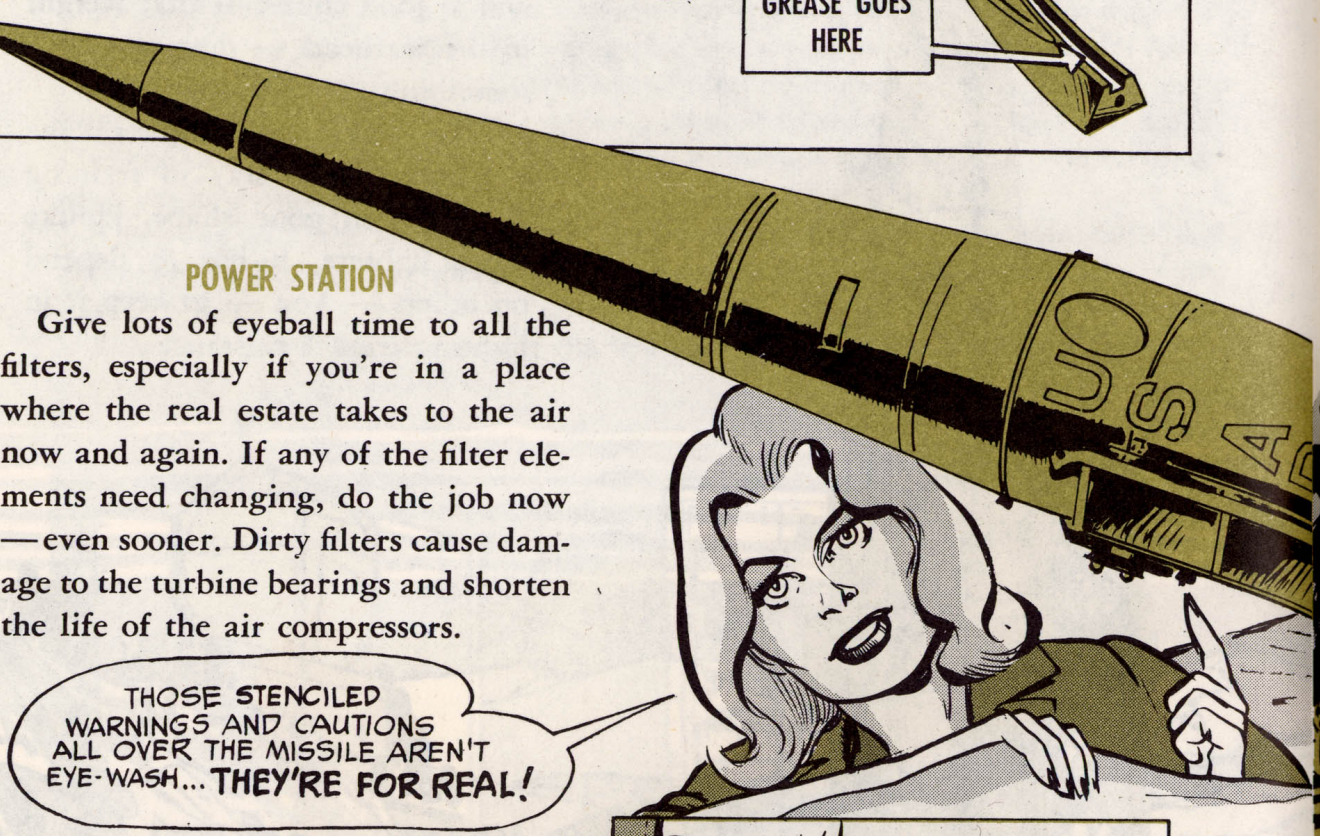
SPLICE BAND QUADRANTS

Before putting the quadrants around the missile, wipe them and the bolts and nuts used to hold them together clean of dirt and other junk. Put a light coat of grease on the threads of the nuts and bolts and on the part of the quadrants that mate with the body. Don't get grease between the body sections. You want friction in those places, not a slippery situation.



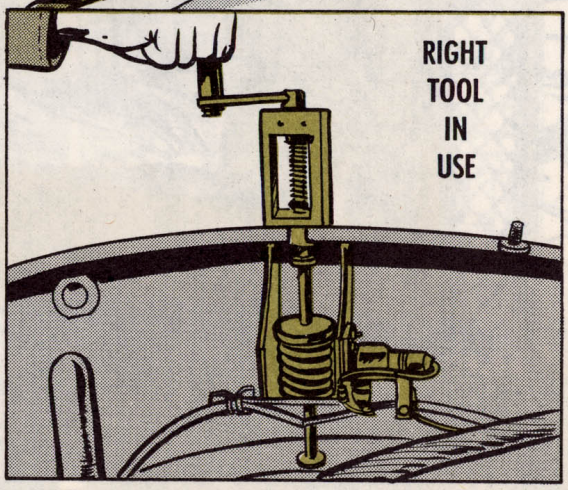
POWER STATION

Give lots of eyeball time to all the filters, especially if you're in a place where the real estate takes to the air now and again. If any of the filter elements need changing, do the job now —even sooner. Dirty filters cause damage to the turbine bearings and shorten the life of the air compressors.



COMPRESSION TOOL

The right compression spring tool for mating the G&C and warhead sections goes under FSN 5120-762-9263 and it's in your missile mating tool set. Forget the old tool, FSN 5120-056-0199. If you try to put it to work, you'll break the warhead separation switch mechanism.



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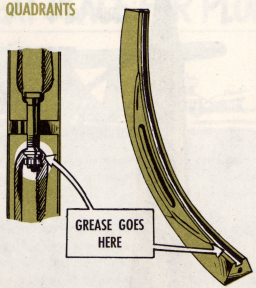

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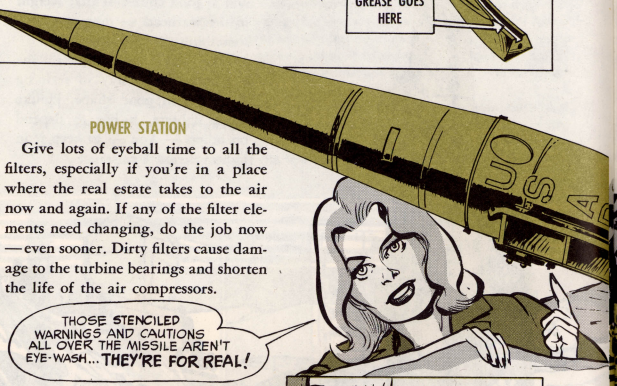

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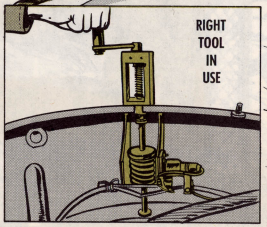

CONTAINERS

Your aluminum G&C section container covers really groan whenever you use one as a workstand. If you have an aluminum cover, use the test stand in your system test station to support the G&C section when you work on it. Covers numbered below 348 and above 474 are made of steel and can take the weight of the G&C section.

The plastic tubing on the wiring harnesses in your shipping and storage containers needs to be replaced if it turns dark brown or black. The change in color from clear means the stuff is turning brittle and is no longer doing the kind of insulating job it should. Check the tubing at least once every six months. If it needs replacing, your support people will take care of it the way it says in TM 9-8140-375-24.

MORE

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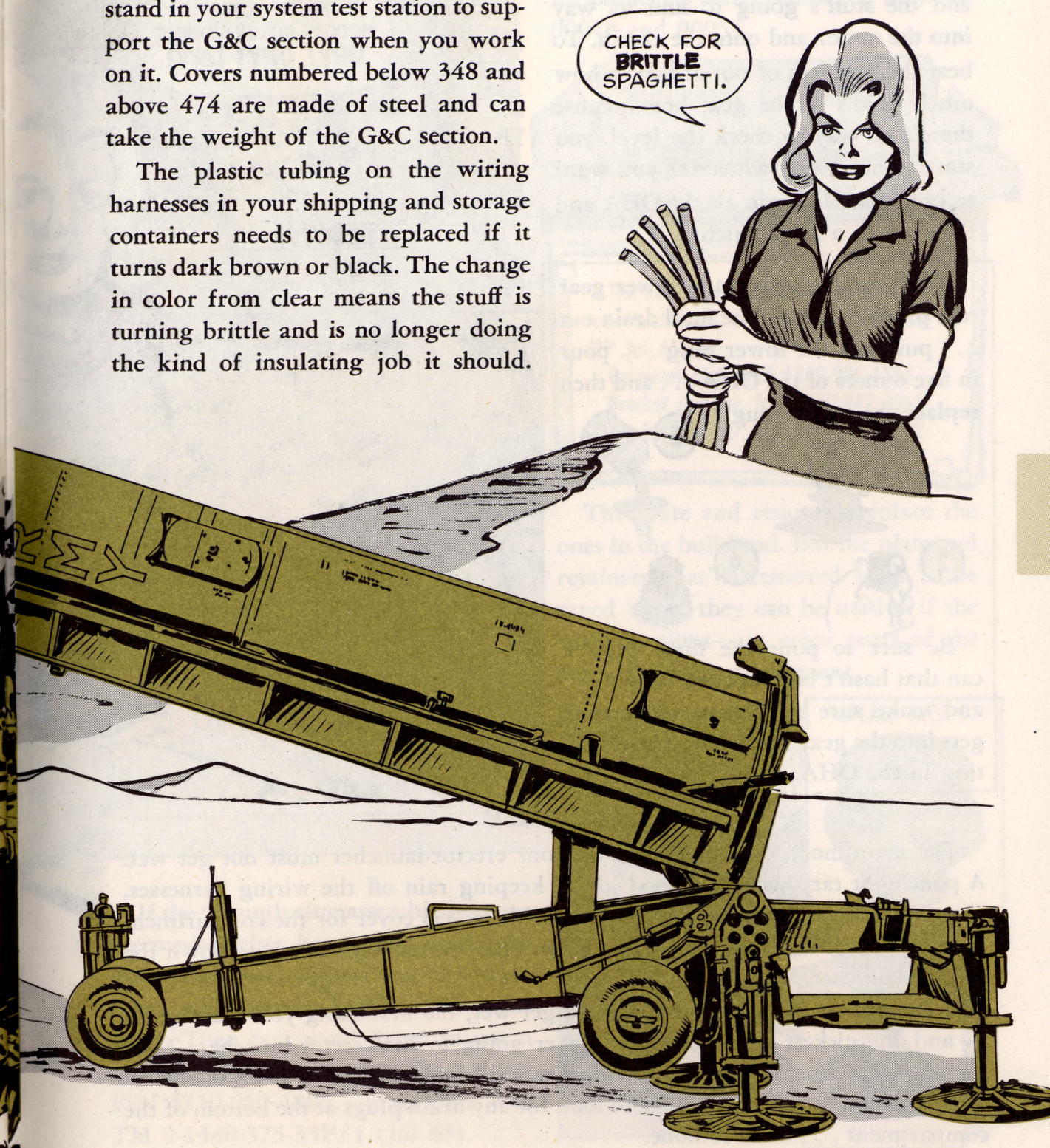
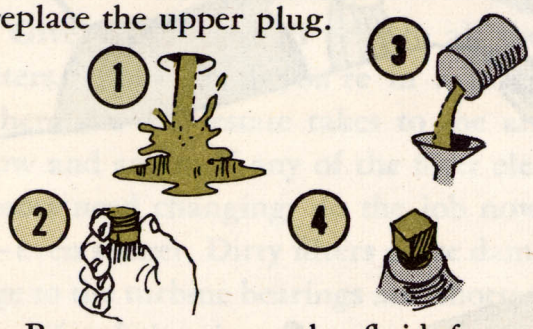


PS MORE

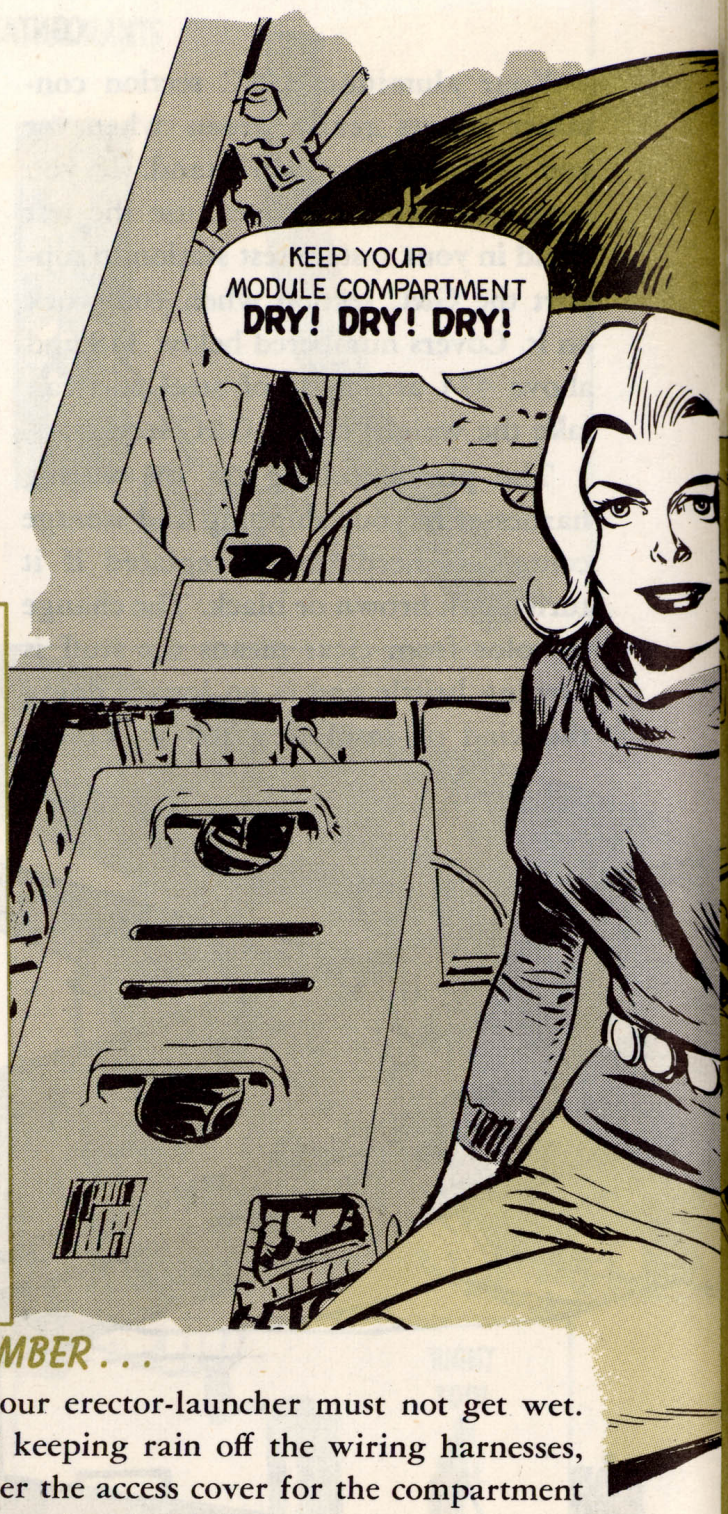
ERECTOR-LAUNCHER

You don't do any guessing about the level of the hydraulic fluid in the launch pad actuator gear box of your erector-launcher. Too much OHA in the box and the stuff's going to find its way into the motor and onto the clutch. To beat the problem of not knowing how much fluid's in the gear box because there's no way to check the level, you start from scratch whenever you want to put in fluid. Drain all the OHA and then put in a fresh batch.

Take out the upper and lower gear case plugs . . . let all the fluid drain out . . . put back the lower plug . . . pour in five ounces of the OHA . . . and then replace the upper plug.



Be sure to pour the fluid from a can that hasn't been opened before . . . and make sure no dirt or other stuff gets into the gear box when you're putting in the OHA.



REMEMBER . . .

The main module compartment on your erector-launcher must not get wet. A poncho or tarp will do a good job of keeping rain off the wiring harnesses, circuit breakers and what-have-you after the access cover for the compartment is removed. Be sure the access cover's in place before you ever hose down the erector-launcher.

If the gear in the compartment does get wet, the first thing you want to do — and do quickest — is cut off the power going to the erector-launcher. Then get out some dry rags and your winterization heater and go to work on everything that got wet. Don't bother to look for any drain plugs at the bottom of the compartment . . . there're none.

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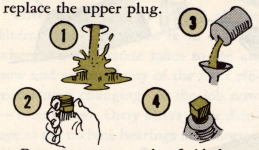

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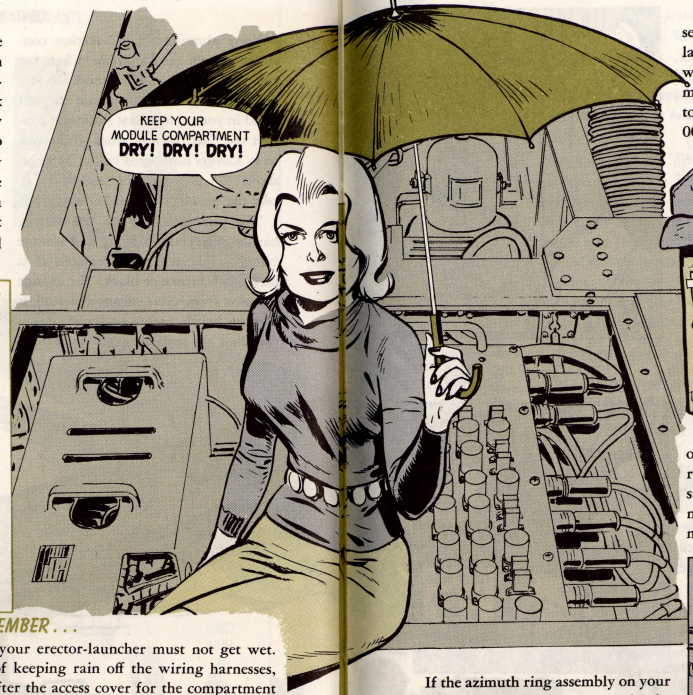

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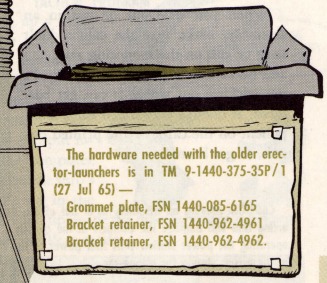
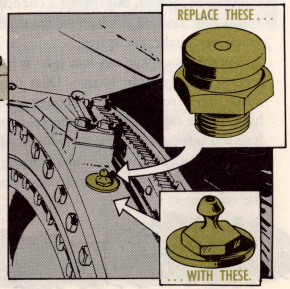
The latest type of 22W10 cable assembly has an outside diameter that's larger than the original. It won't work with the hardware installed in the main module compartment bulkhead of erector launchers serial-numbered between 00016 and 00053.



The hardware needed with the older erector-launchers is in TM 9-1440-375-35P/1 (27 Jul 65) —
Grommet plate, FSN 1440-085-6165
Bracket retainer, FSN 1440-962-4961
Bracket retainer, FSN 1440-962-4962.

The plate and retainers replace the ones in the bulkhead. But the plate and retainers that're removed need to be saved 'cause they can be used — if the need develops — in other parts of the main module compartment.



If the azimuth ring assembly on your erector-launcher has button-head lube fittings ask your support unit to replace them with standard MS-15003-1 fittings. Then you won't have to use a special grease gun adapter. The fittings, FSN 4730-050-4208, are on page 8 in TM 9-1440-375-35P/1 (Jul 65).

MORE

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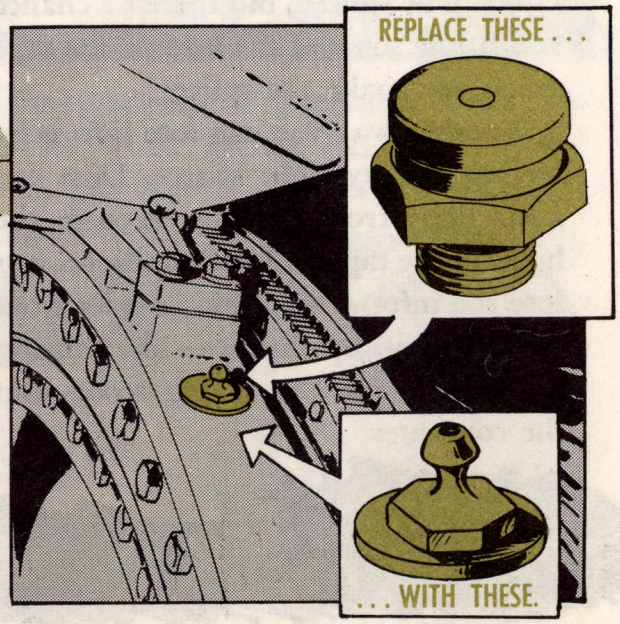

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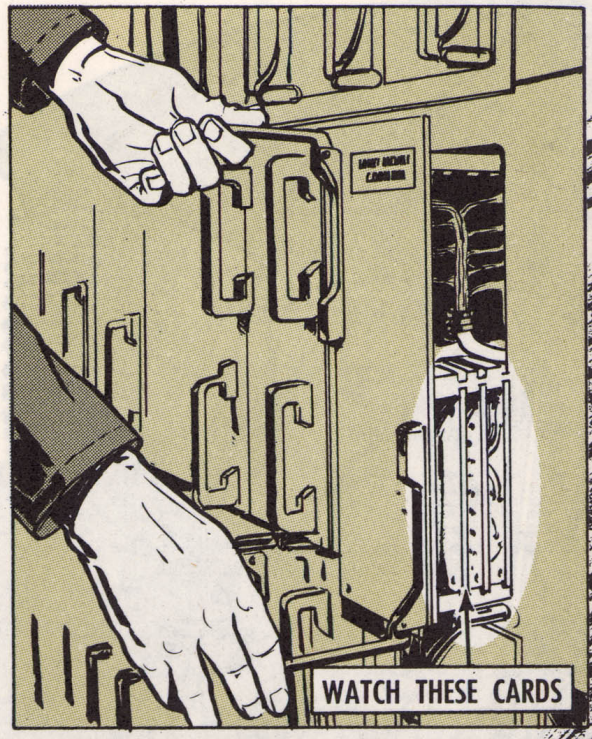
P.S MORE

PROGRAMMER TEST STATION

You clean the inside and outside of the PTS with plain soap and water, make sure the stuff's not slopped around 'cause there's a chance it might get into the assemblies and foul up the chassis with corrosion and short circuits.

When you take out or put in an assembly, make sure the cables don't snag or rub on the mounting rack . . . and make sure a printed circuit card's not sticking out where it can get battered. It doesn't take much for a component on the card, or the printed circuit, to get busted.

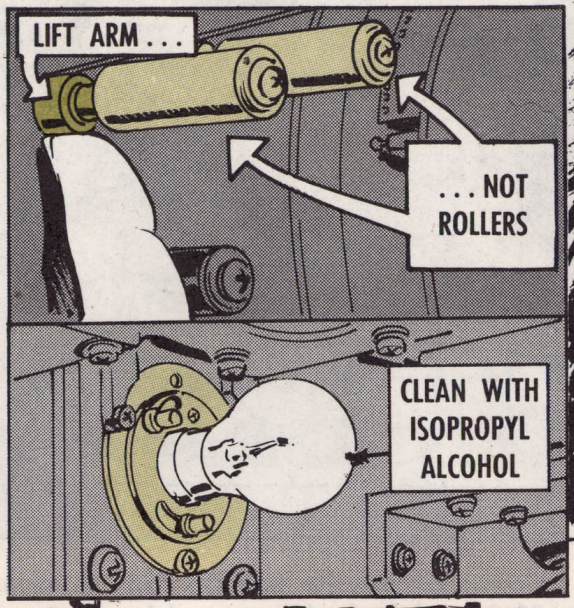


CAUTION: Moving an assembly in or out of the mounting rack with the power on can cause arcing that will damage the contacts in the chassis — so off with the power! After the guy operating the power station yells that power to the PTS is off, it doesn't hurt any to walk up to the power station for a look-see.

TAPE READER

When you put a tape in the tape reader, lift the arm — not the rollers. Lifting on the rollers causes them to loosen and break the tape. Sure . . . the tape can be spliced, but there's a chance you'll lose some of the info on the tape when you make the splice.

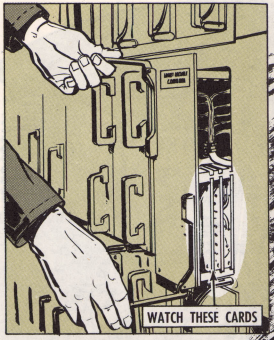
Another way you can lose info is by having a dirty light source. Dust can keep light from getting through the holes in the tape and with no light, you lose the info. A dirty tape reader head can also foul up things — like causing the tape to put the wrong scoop into the computer.



PROGRAMMER TEST STATION

You clean the inside and outside of the PTS with plain soap and water, make sure the stuff's not slopped around 'cause there's a chance it might get into the assemblies and foul up the chassis with corrosion and short circuits.

When you take out or put in an assembly, make sure the cables don't snag or rub on the mounting rack . . . and make sure a printed circuit card's not sticking out where it can get battered. It doesn't take much for a component on the card, or the printed circuit, to get busted.



CAUTION: Moving an assembly in or out of the mounting rack with the power on can cause arcing that will damage the contacts in the chassis — so off with the power! After the guy operating the power station yells that power to the PTS is off, it doesn't hurt any to walk up to the power station for a look-see.

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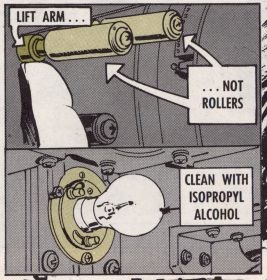
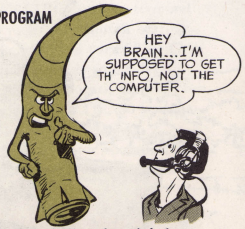


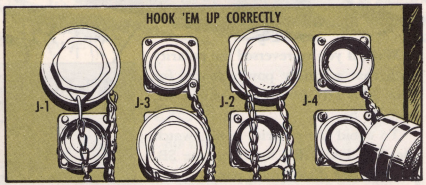
Clean the light source and tape reader head at least once a week with a soft, lint-free cloth that's been dampened with isopropyl alcohol.

FSN 7920-205-3453 will get you a package of the cloth from the GSA catalog. A pint of the alcohol comes under 6505-205-6513. It's rubbing alcohol — the kind the medics use.

TACTICAL PROGRAM

Before cranking up a tactical program, take a look at the shorting plugs outside the PTS. They have to be in the J1, J2, J3 and J4 connectors at the PTS's rear cable entry. If they are not, as soon as you put information into the computer and start the exercise the info's going to get hung up in the computer and not wind up inside the missile, where it belongs when you're in the artillery mode.





If you don't know the right tactical program to use, check Section IV of TM 9-1430-375-12. Section XIII tells you the right acceptance tape to use. Section V gives you the right diagnostic routine number to use.

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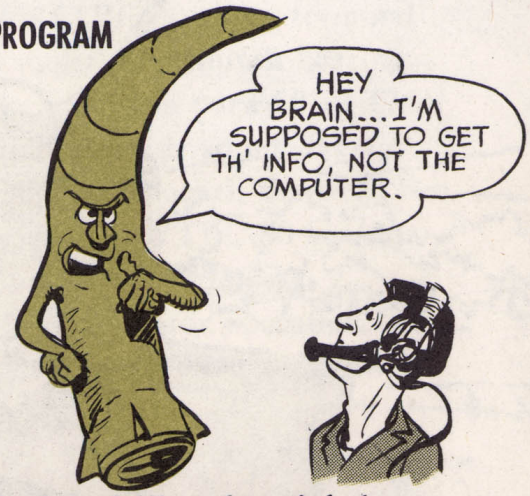

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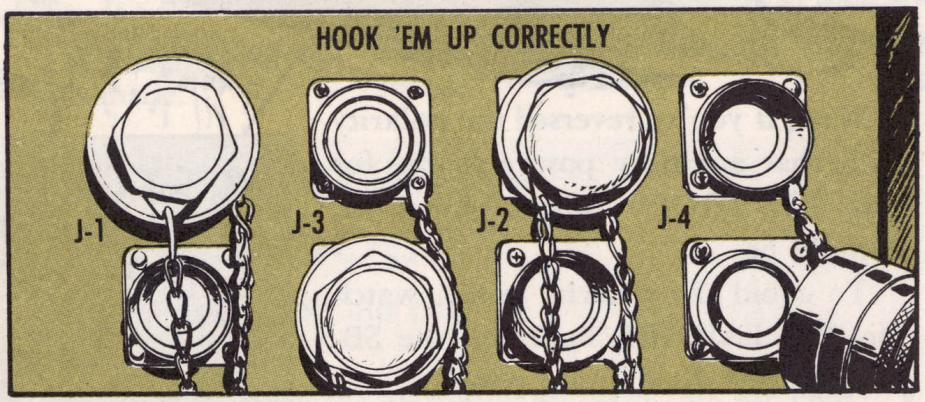

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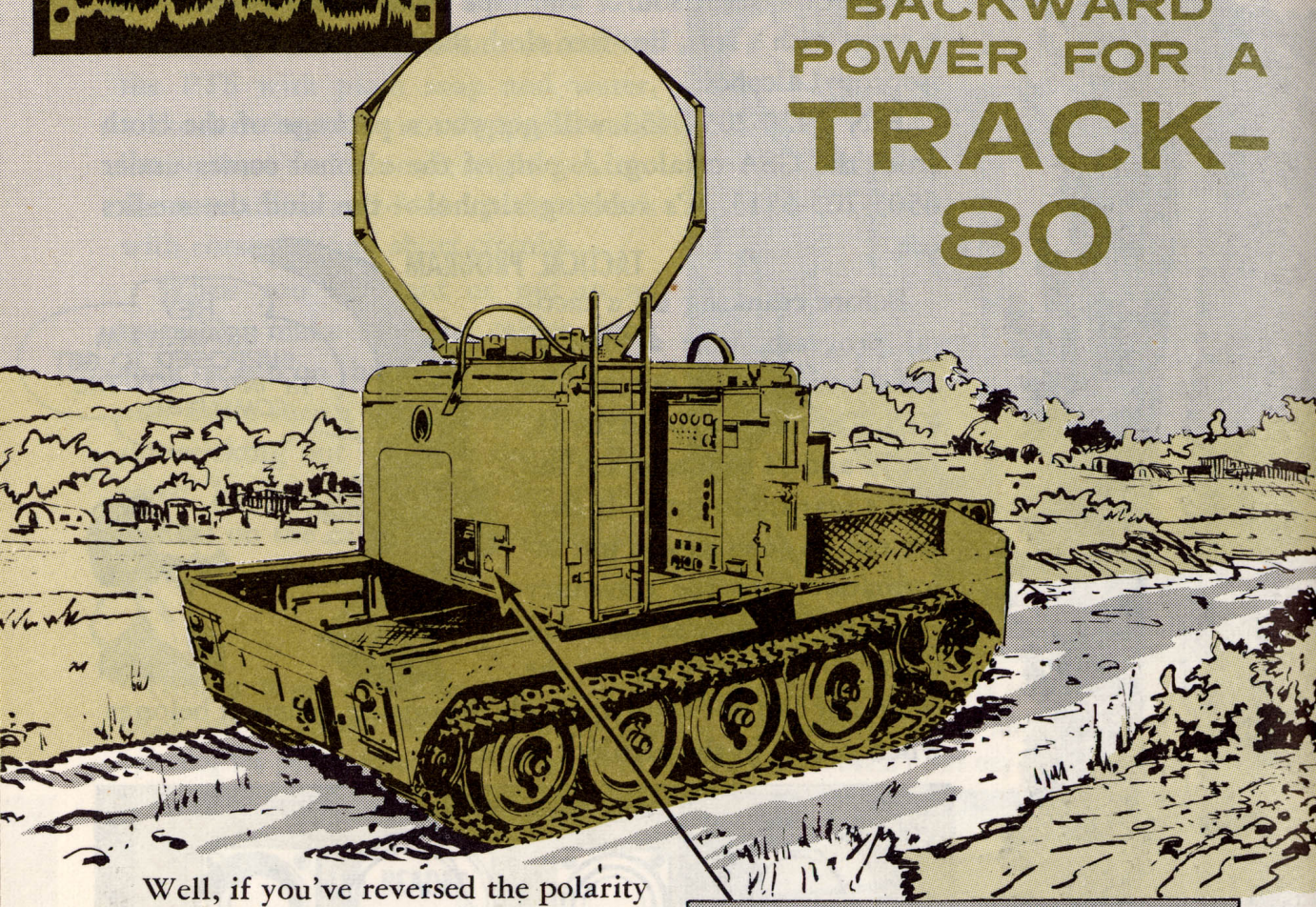
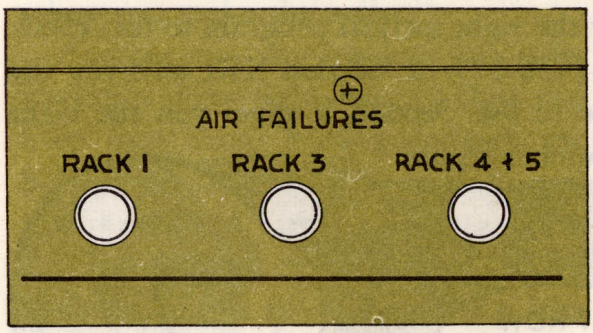
END

BACKWARD POWER FOR A TRACK-80

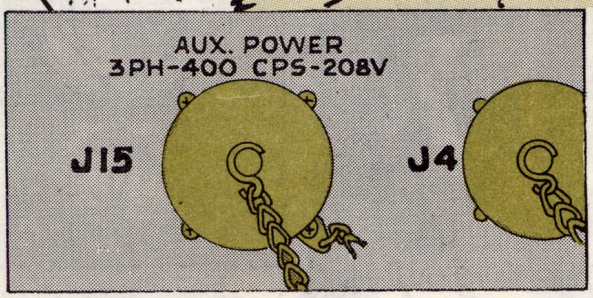


Well, if you've reversed the polarity with that auxiliary power source for your AN/TRC-80 radio terminal set, it could be.

To avoid the polarity panic, watch the AIR FAILURE lights on the SB-1565 power distribution panel.



If the lights don't come on immediately when you flip on the AM-3308 control panel's filament switch, you can bet your best Saturday night toot the polarity's reversed.



Just turn the connections around on the AUX POWER connector at the power and signal entry panel. This will line up the polarity right.

Throwing that backward power into the Track-80's system will reverse the air compressor motor, shear the shaft and chip the vanes in the air pump atop the S-254 shelter.

Then, the next time . . . if there is a next time . . . you won't be able to inflate the antenna bag.

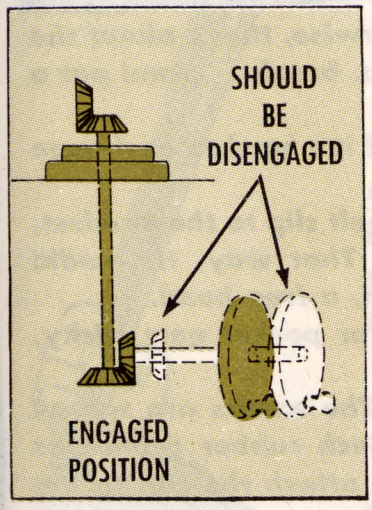
SAVE YOUR AZIMUTH SHAFT

Makin' the worm turn is tough with a bent shaft.

That's right.

A bent fine azimuth adjust shaft comes to your AN/TRC-80 radio terminal set if the spring doesn't free the adjuster after you've set the azimuth bearing.

Give the adjust knob a gentle pull after doing like it says in para 58 in TM 11-5820-469-10 (Jan 63) for azimuth orientation and you'll head off damage.



If the shaft stays engaged with the gears, the shaft'll get bent like a bow when the AS-1270/TRC-80 antenna assembly's lowered and put away.

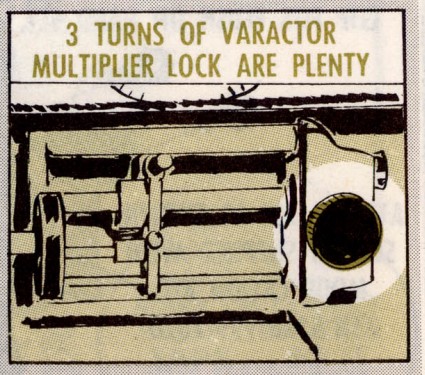
Next time you set up the Track-80 for operation the adjuster won't make the drive worm turn for an azimuth setting. . . .

. . . Or, it'll keep things up in the air. Like, f'rinstance, it'll clog the antenna housing assembly, keeping it from snuggling into its nest atop the shelter.

It's best to use your eyeballs and your fingers to make sure the adjuster's released after each azimuth setting is made.

GOTTA SCREW LUG LOOSE?

A lug running loose in your AN/TRC-80 radio terminal set can louse up the works.



Especially, if it's the lug that holds the output cavity tuning lock (that's a screw to you) in place on the varactor multiplier in the AM-3302 receiver amplifier-converter. Whew!!

Too much turning of the tuning lock'll free the lug and let it drop into the rack's equipment. It can set up a circuit where you don't want one. And pffst, a short ends operations.

The same goes for the locks on the multiplier unit and phase shifter in racks 4 and 5 . . . and the transmit amplifier-converter rack.

Releasing the lock with a couple or 3 turns . . . or enough turns to free the tuning control knob . . . will save many a hair-pulling headache — and many hours of labor retrieving the screw.

Dear Editor,

When the action gets hot, during maneuvers or otherwise, that's about the time we start losing our H-138/U handsets. They drop, break . . . and put a strain on our AN/PRC-25 communications.

Like you know, handset replacement is slow . . . and it's hard to exchange them if the shell is cracked.

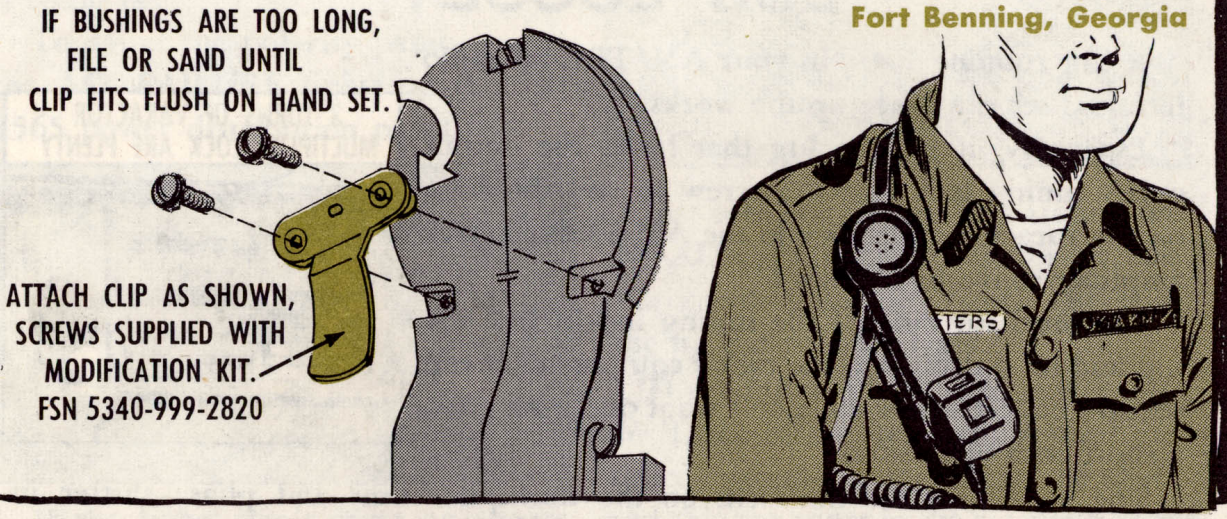
So-o-o-o, what to do? We solved it by attaching a belt clip to the handset, and then clipping it to the radio's shoulder harness. That way, the radio operator can monitor incoming messages with, ahem, a free hand.

Monitoring on a long march with handset in hand or pocket gets sticky, so the clip really cuts it.

We use the belt clip from TA-1/PT telephone sets. The screws are spaced almost like they were made for the H-138. Two half-inch rubber grommets (or you can split 2 earplugs in half) and 2 long screws attach the clip to the handsets.

The clip fix saves our unit considerable money and problems in replacing handsets.

SSgt Jim L. Nyberg
Fort Benning, Georgia



(Ed Note: Great idea, and it should save more than cash. Also, you can now get the belt clip thru the supply system with FSN 5340-999-2820. You get a perfect screwhole match with the special clip, too. And, great news, all future procured H-138 handsets will come with the belt clip attached.)

SB ROD FOR THE SOD

Dear Half-Mast,

I've been looking for a stock number for the ground rod for the SB-22/PT switchboard, but no luck. Will you give me a hand?

Sgt M. F.

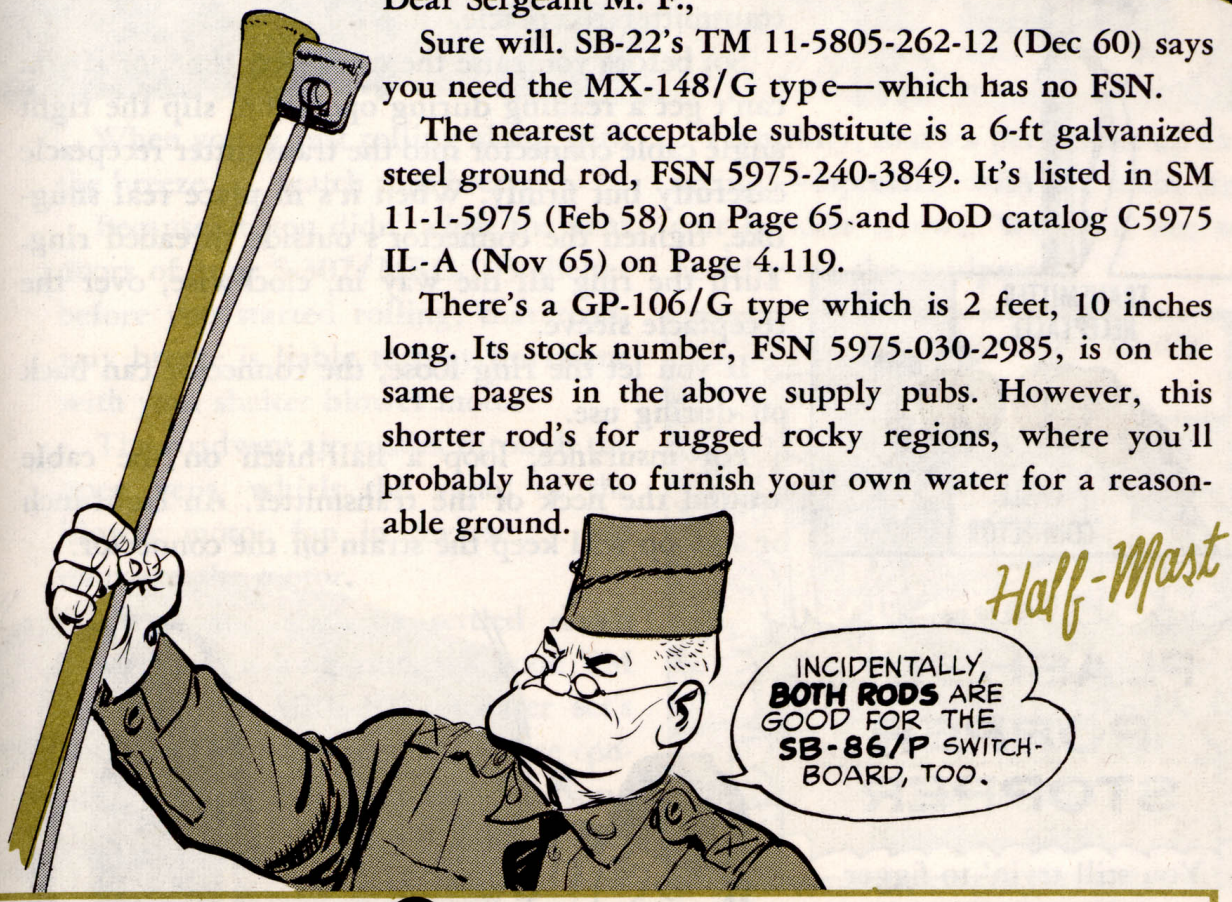
Dear Sergeant M. F.,

Sure will. SB-22's TM 11-5805-262-12 (Dec 60) says you need the MX-148/G type—which has no FSN.

The nearest acceptable substitute is a 6-ft galvanized steel ground rod, FSN 5975-240-3849. It's listed in SM 11-1-5975 (Feb 58) on Page 65 and DoD catalog C5975 IL-A (Nov 65) on Page 4.119.

There's a GP-106/G type which is 2 feet, 10 inches long. Its stock number, FSN 5975-030-2985, is on the same pages in the above supply pubs. However, this shorter rod's for rugged rocky regions, where you'll probably have to furnish your own water for a reasonable ground.

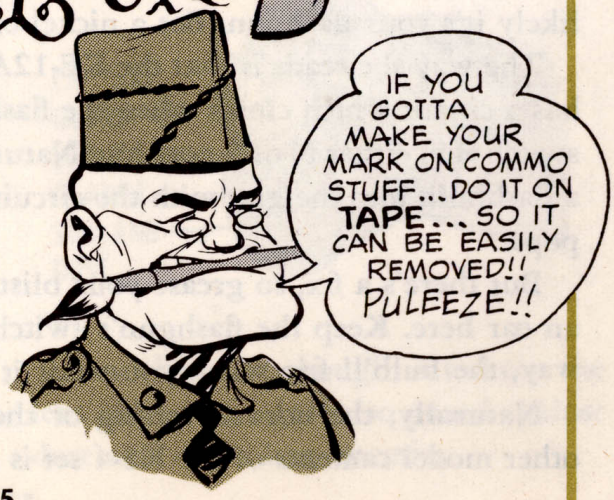
Half-Mast



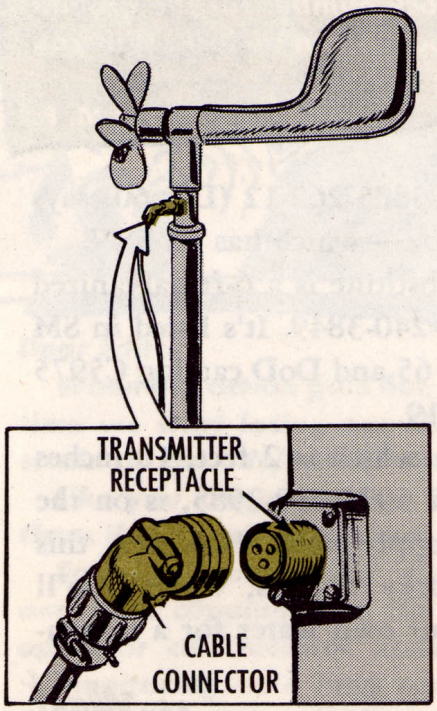
ART FOR ART'S SAKE

When your equipment goes kaput and heads for repairs, you may never see it again.

Meanwhile, old faithful—painted panel and all—is passed around like a bad buck until it's repaired or overhauled. Alas! Your brand's still on 'er. This often takes extra doing to give that little beauty a face-lifting before she's ready for re-issue.



TO MEASURE THE WIND, TIGHTEN



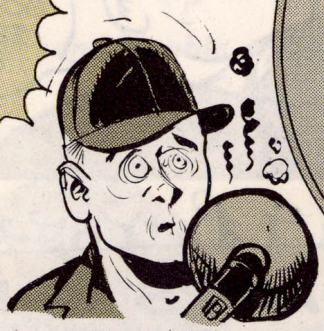
If you can't get a reading from the transmitter of your AN/PMQ-6 wind measuring set, grab a look at the transmission cable connector. There's a good chance the connector isn't firmly seated in the transmitter receptacle.

So, before you raise the mast next time, or if you can't get a reading during operation, slip the right angle cable connector into the transmitter receptacle carefully but firmly. When it's in place real snug-like, tighten the connector's outside threaded ring. Turn the ring all the way in, clockwise, over the receptacle sleeve.

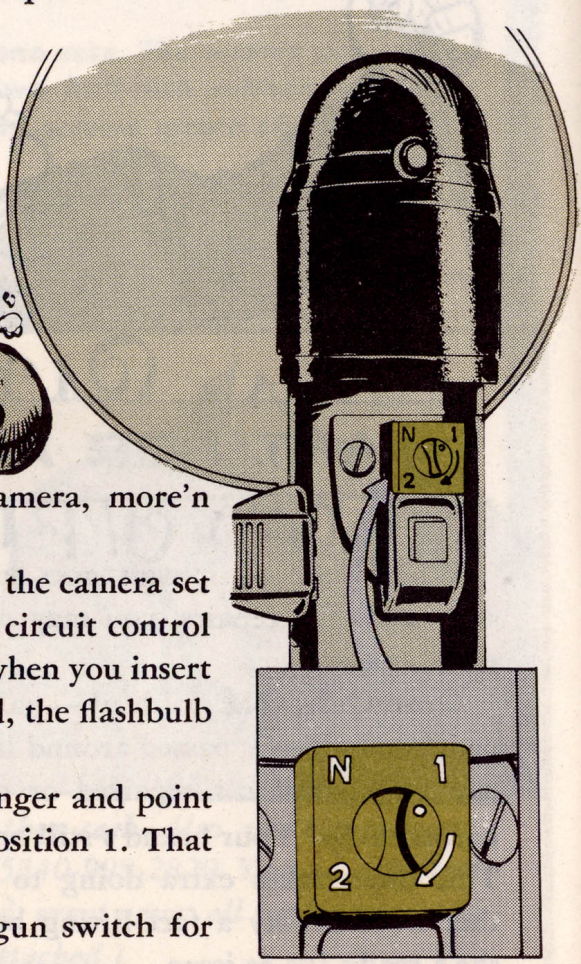
If you let the ring loose, the connector can back off during use.

For insurance, loop a half-hitch on the cable around the neck of the transmitter. An eight-inch or so loop will keep the strain off the connector.

FLASHBULB POPPER STOPPER



You still tryin' to figger those poppin' flashbulbs on your KS-4A(2) camera set?

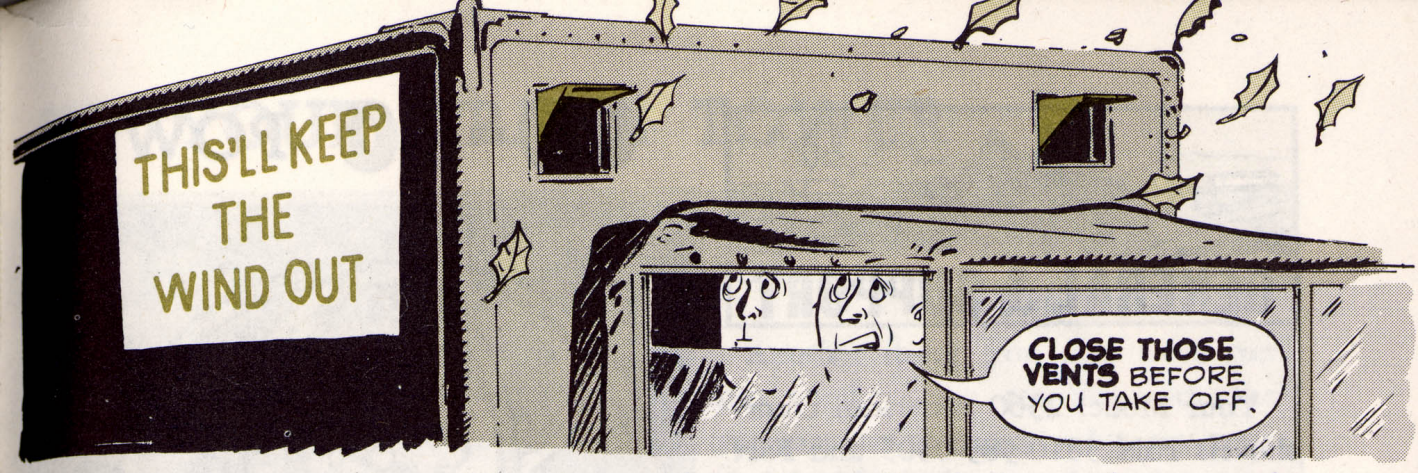


If you're workin' with the KE-12A(2) camera, more'n likely it's your flashgun. Bet a nickel on it.

The way she reads is that the KE-12A(2) of the camera set has a circuit which closes when the flashgun's circuit control switch is in either N or 2 position. Naturally, when you insert a flashbulb into the gun with the circuit closed, the flashbulb pops.

But there's a fix, so grease your blistered finger and point an ear here. Keep the flashgun's switch on Position 1. That way, the bulb'll fire when you want it to.

Naturally, the normal setting of the flashgun switch for other model cameras of the KS-4 set is N.



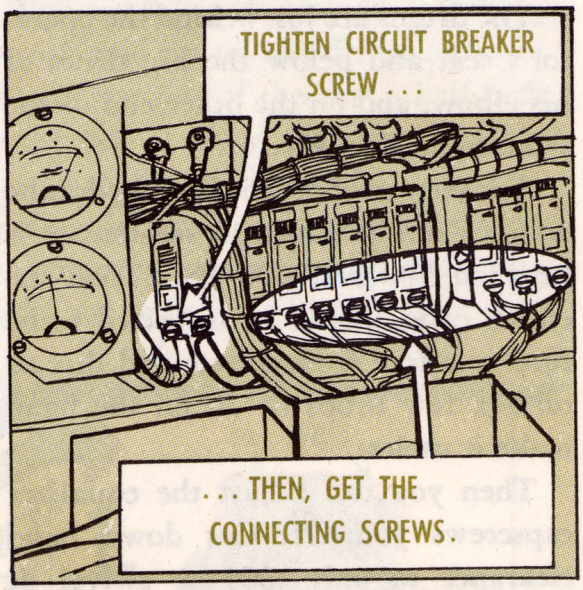
When you're just rolling along with the breeze . . . watch that breeze!

Because, if you didn't close the vent doors of your S-307/MRC-103 shelter before you started rolling, that roadway breeze is liable to play hurricane with your shelter blower motor.

The roadway air rushes through the open vent, whirls the vanes of the blower motor fan in reverse . . . and damages the motor.

When the shelter's settled down again after a long ride, it's good PM to check the MRC-103 repeater set's power distribution panel for loose connections. Like, the screws that snug down the wiring can work loose over the road.

Naturally, that's a perfect set-up for arcing—especially with the main circuit breaker screws. Which is not so healthy for the equipment.



HOLE STORY ON KE-4

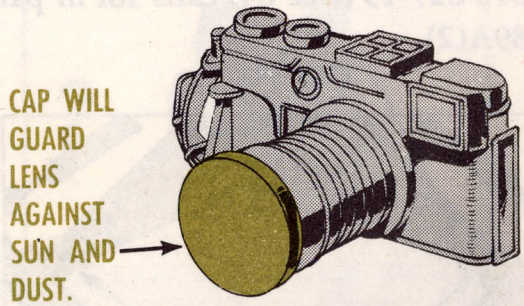
The sun'll come and go, and you'll never know it's left its mark on that KE-4 still picture camera.

That is, you won't know until the film's developed with spots on it.

Stop looking puzzled, and listen.

Acting as a magnifying glass, the lens'll help those beams burn pinholes — or worse — in the shutter curtain. And, that means curtains for the film.

Keeping the lens hood on when you're not picture taking'll help shade the lens from the sun.



Your best bet, though, is to keep the lens cap on, too. It'll also guard against dust and other lens enemies.

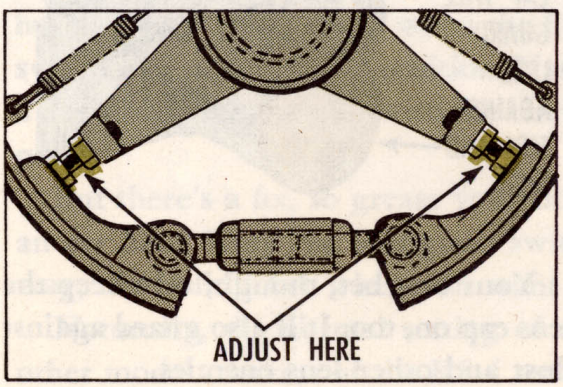
GO-GO POWER

Your Model 2360 American crane-shovels FSN 3810-989-0505 and FSN 3810-989-0506, have a new recipe for hoist drum adjustments. The idea is to make the clutch hold better and cut down slipping.

The drums are just behind the operator's seat and below the big drum at his elbow, and on the other end of the same twin assembly.

Ask your support to check hydraulic accumulator pressure to see that it is between 500 and 600 PSI. Then the clutch band should be inspected to be sure it is free from grease and dirt or oil—a few drops of oil on the band make it useless.

Then you can adjust the equalizer capscrews yourself. Cut down band clearance to only .005 at swivel or "dead" end and to .010 at cylinder or "live" end, with .008 inch gap in the center. This is tighter than TM 5-3810-227-15 (Dec 64) calls for in para 189A(2).



New clutches should be adjusted several times during a running-in period, with a sharp eye for high spots on the lining. Make sure the band shapes in to the clutch face.

Both right and left clutches should be balanced so you get proper control for dragline work.

GO-GO POWER IN YOUR CRANE TOWER

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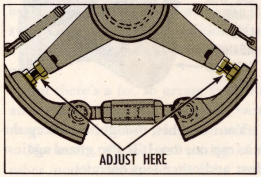

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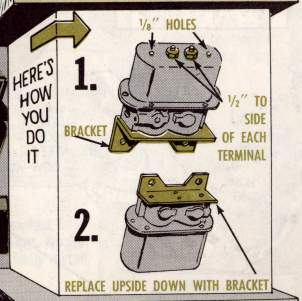
FIXIT FLIP

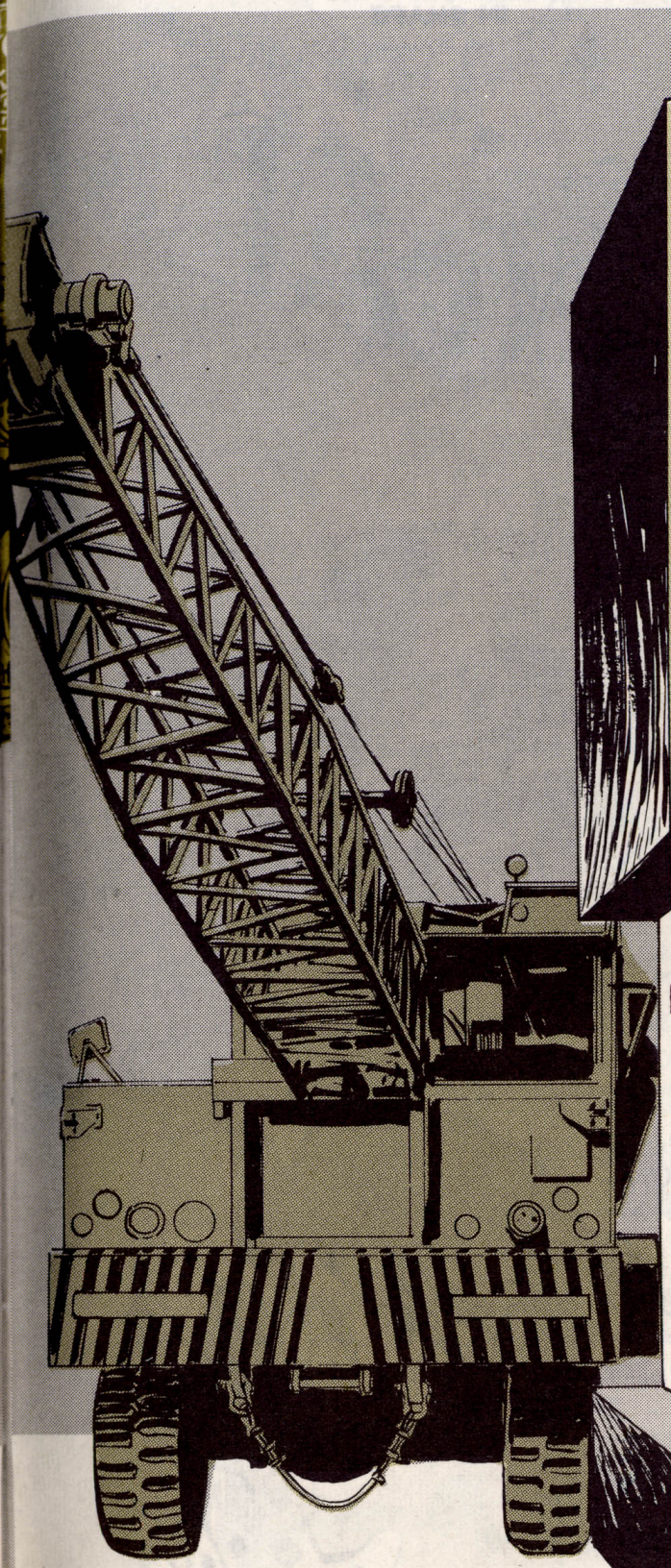
Another thing, you may have run into condensation trouble with the transmission solenoid valve on your Model 2360. When condensation wets the valve, the 2 coils may short out and the transmission may not shift from high to low or from low to high.

You can solve the problem by taking the solenoid cap off and drilling a ⅛-in hole in the top of the cap a half-inch to the side of either terminal. Replace it, and then turn the whole works, including the bracket, upside down. Then any moisture that gets in will drain right out again.



Before you flipflop that solenoid, be sure to take the wires and hoses loose. They will reach just fine to reconnect.

IN YOUR CRANE TOWER



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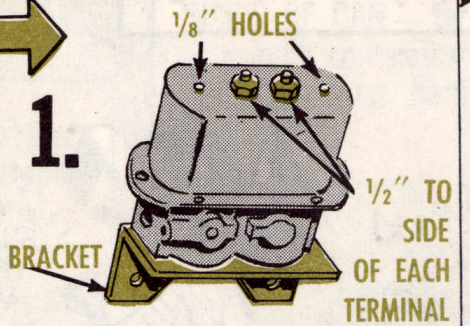
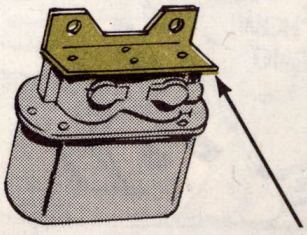
HERE'S HOW YOU DO IT

1.



2.



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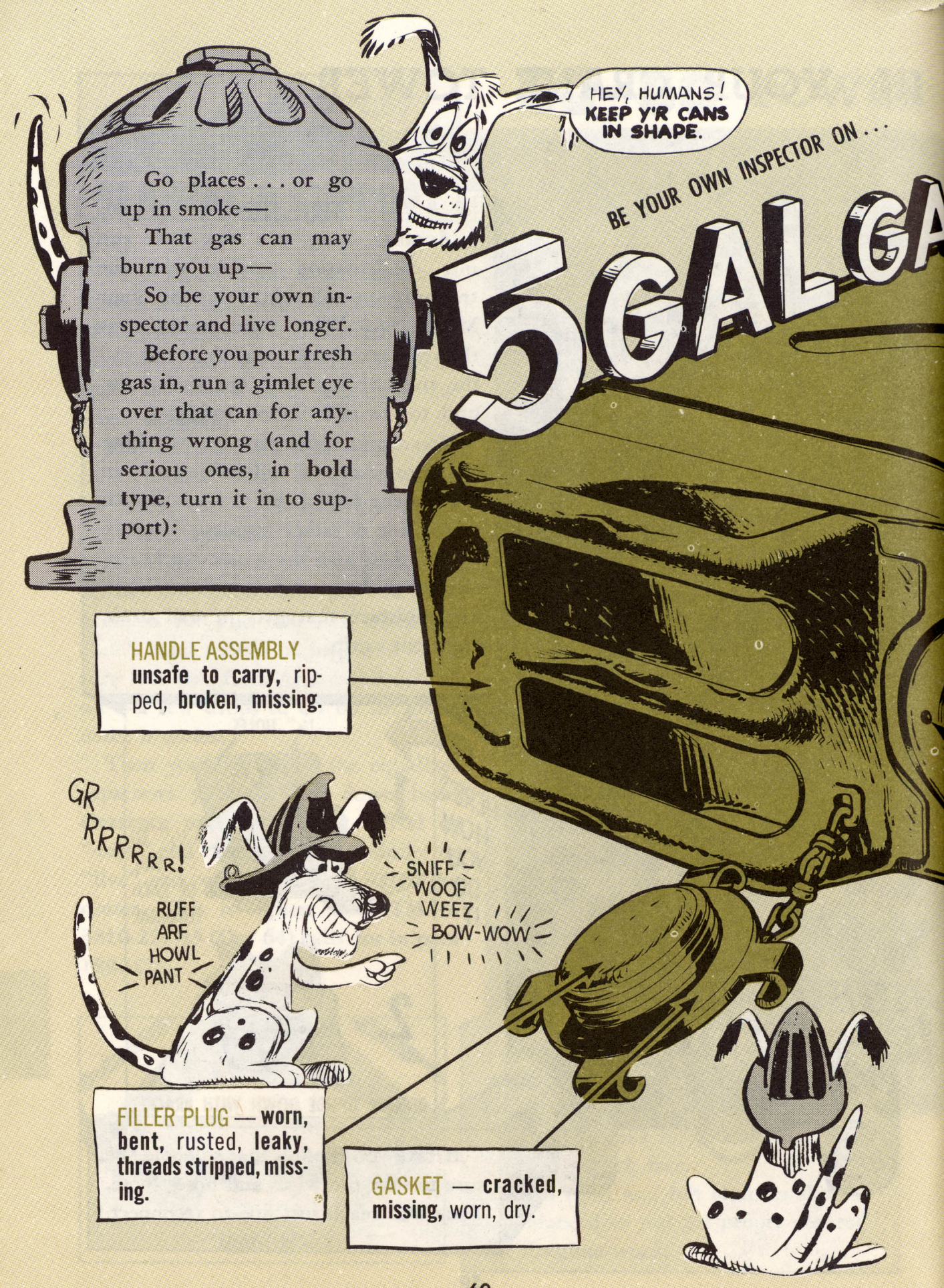
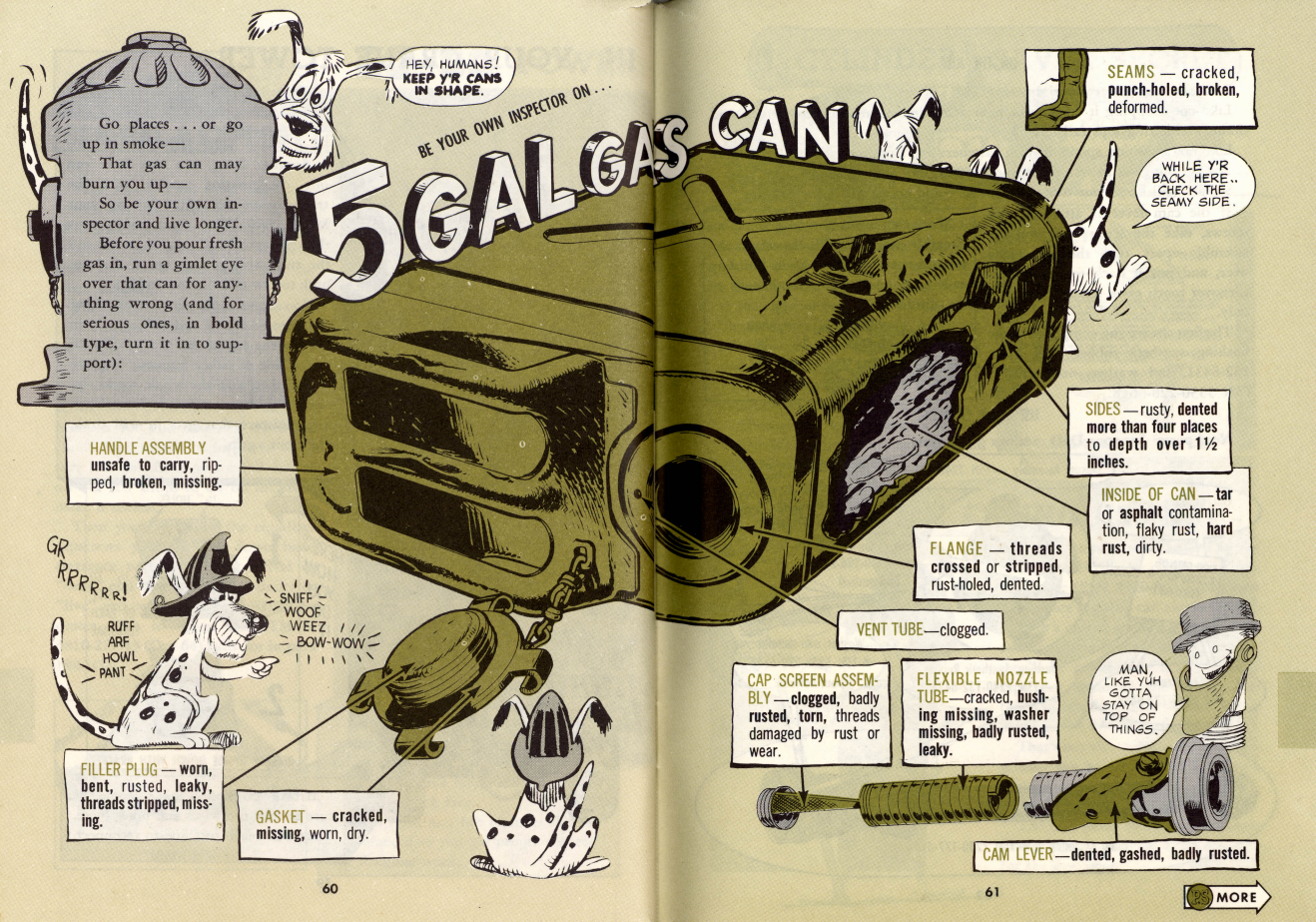
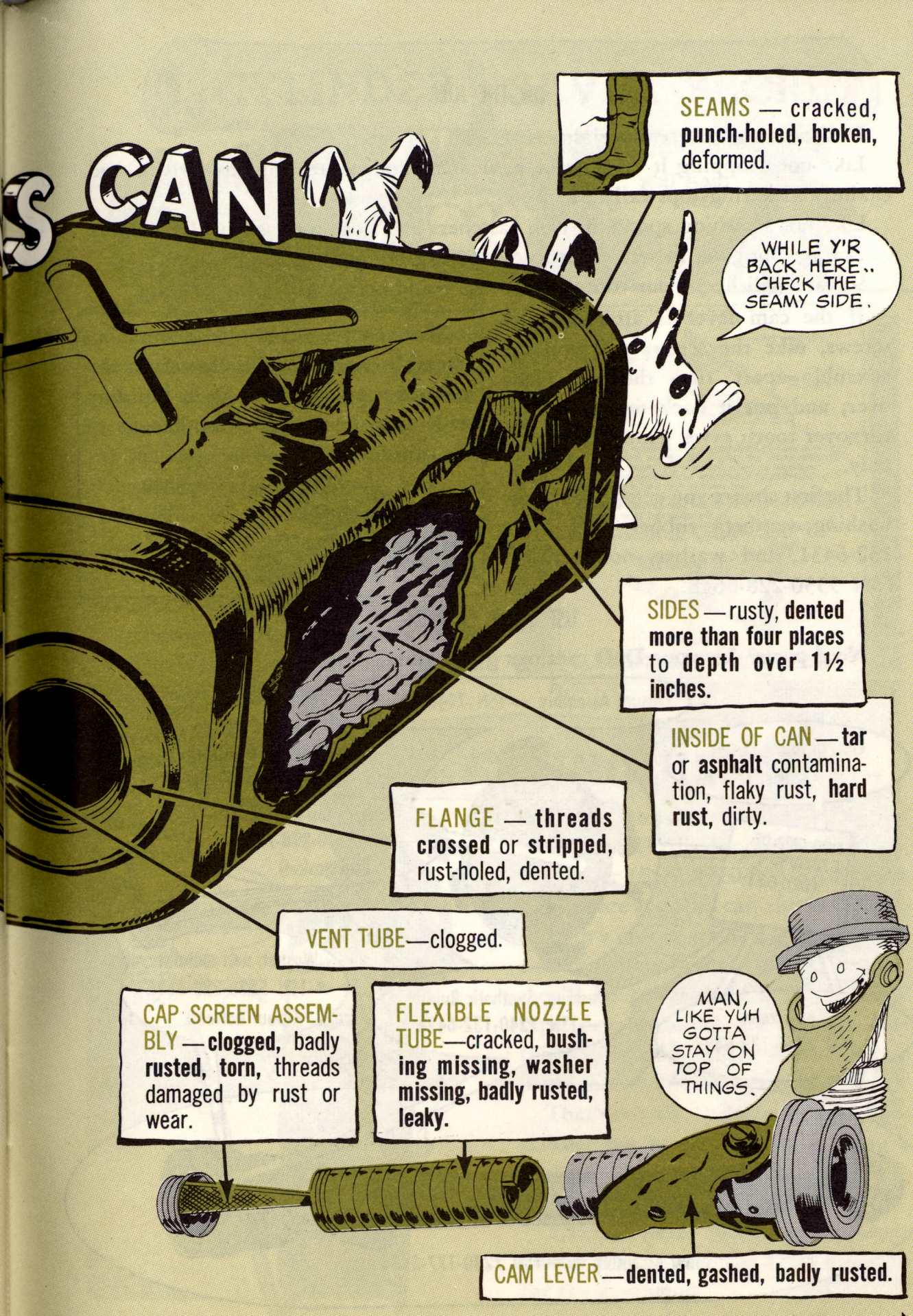

HEY, HUMANS! KEEP Y'R CANS IN SHAPE.
BE YOUR OWN INSPECTOR ON . . .
5 GAL GA
Go places . . . or go up in smoke—
That gas can may burn you up—
So be your own inspector and live longer.
Before you pour fresh gas in, run a gimlet eye over that can for anything wrong (and for serious ones, in **bold type**, turn it in to support):
HANDLE ASSEMBLY **unsafe to carry,** ripped, **broken, missing.**
GR RRRRRR!
RUFF ARF HOWL PANT
SNIFF WOOF WEEZ BOW-WOW
FILLER PLUG — **worn, bent,** rusted, **leaky, threads stripped, missing.**
GASKET — **cracked, missing,** worn, dry.


Go places . . . or go up in smoke—
That gas can may burn you up—
So be your own inspector and live longer.
Before you pour fresh gas in, run a gimlet eye over that can for anything wrong (and for serious ones, in **bold type**, turn it in to support):
HEY, HUMANS! **KEEP Y'R CANS IN SHAPE.**
BE YOUR OWN INSPECTOR ON . . .
5 GAL GAS CAN
SEAMS — cracked, **punch-holed, broken,** deformed.
WHILE Y'R BACK HERE.. CHECK THE SEAMY SIDE.
SIDES — rusty, **dented more than four places** to **depth over 1½ inches.**
INSIDE OF CAN — **tar** or **asphalt** contamination, flaky rust, **hard rust,** dirty.
HANDLE ASSEMBLY **unsafe to carry,** ripped, **broken, missing.**
FLANGE — **threads crossed** or **stripped,** rust-holed, dented.
VENT TUBE—clogged.
GR RRRRRR!
RUFF ARF HOWL PANT
SNIFF WOOF WEEZ BOW-WOW
CAP SCREEN ASSEMBLY — **clogged,** badly **rusted, torn,** threads damaged by rust or wear.
FLEXIBLE NOZZLE TUBE—cracked, **bushing missing, washer missing, badly rusted, leaky.**
MAN, LIKE YUH GOTTA STAY ON TOP OF THINGS.
FILLER PLUG — **worn, bent,** rusted, **leaky, threads stripped, missing.**
GASKET — **cracked, missing,** worn, dry.
CAM LEVER—**dented, gashed, badly rusted.**

MORE


S CAN
SEAMS — cracked, **punch-holed, broken,** deformed.
WHILE Y'R BACK HERE.. CHECK THE SEAMY SIDE.
SIDES — rusty, **dented more than four places** to **depth over 1½ inches.**
INSIDE OF CAN — **tar** or **asphalt** contamination, flaky rust, **hard rust,** dirty.
FLANGE — **threads crossed** or **stripped,** rust-holed, dented.
VENT TUBE — clogged.
CAP SCREEN ASSEMBLY — **clogged,** badly **rusted, torn,** threads damaged by rust or wear.
FLEXIBLE NOZZLE TUBE — cracked, **bushing missing, washer missing, badly rusted, leaky.**
MAN, LIKE YUH GOTTA STAY ON TOP OF THINGS.
CAM LEVER — **dented, gashed, badly rusted.**

PS MORE

ON THE JOB

In use, you gotta treat it right—

Like not dropping it on rock or pavement, and no tearing up swivels and chains and letting tops fall off.

Like not smashing spouts or cam fasteners and sloshing gas over the scenery . . . or getting gook in vent pipes to cause gurgling and belching.

So care will keep your conscience clean—and better still, your gasoline.

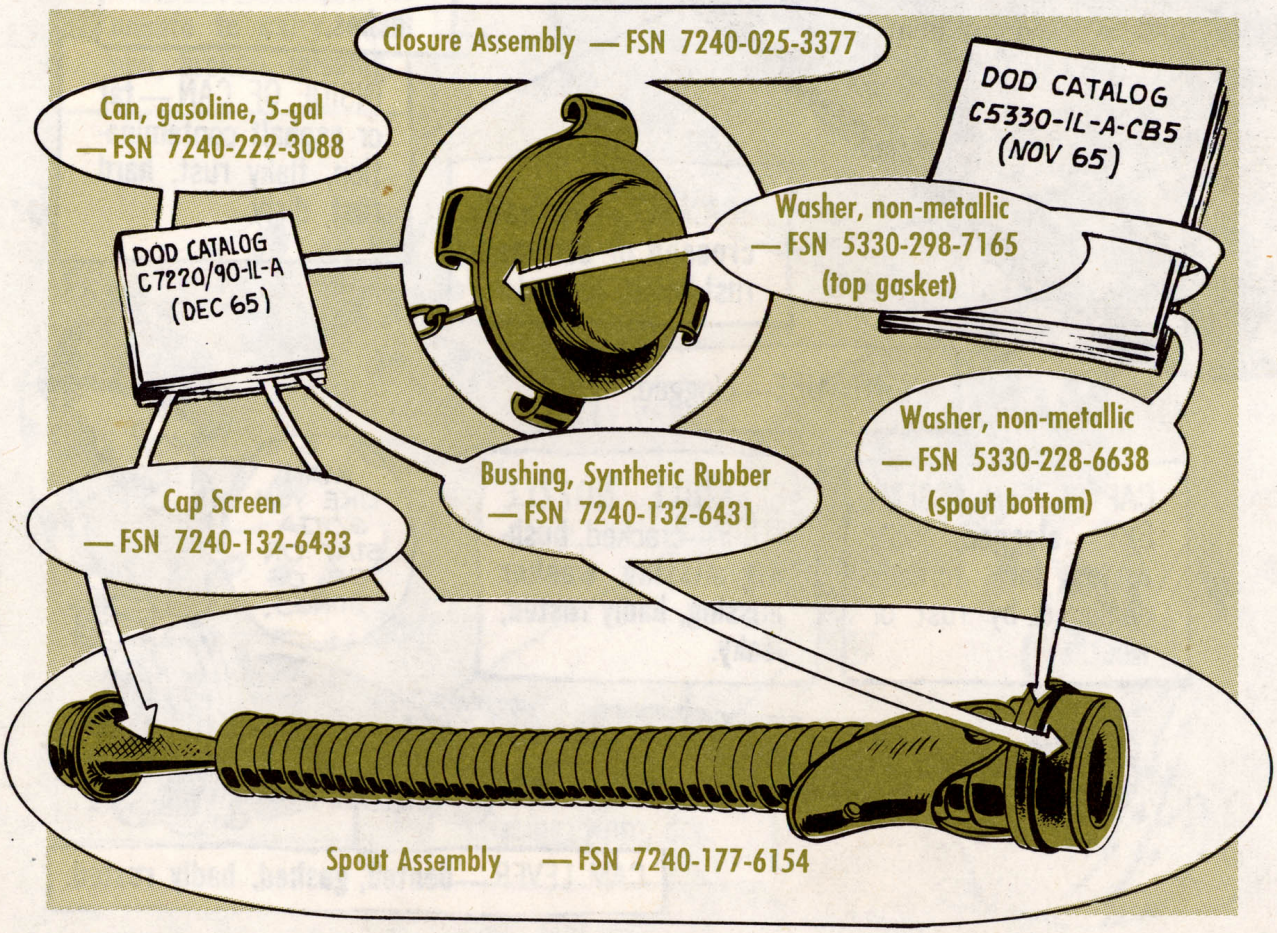
If the cam lever is attached with screws, take the screws out and the assembly apart, turn the brass ring over, and put it back together. This turnover touch gives temporary repair only.

The first chance you get, put in a new bushing, synthetic rubber, FSN 7240-132-6431, and washer, non-metallic, FSN 5330-228-6638.

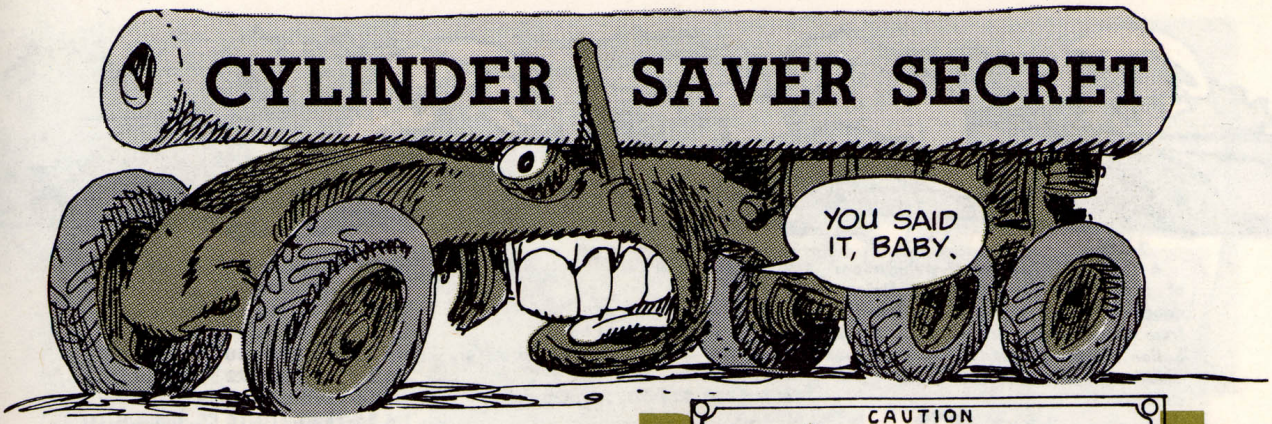
Worn cam levers riveted to the spout assembly can be fixed by having maintenance support put a ⅛-in build-up with mild steel rod on both ends of the cam lever.

USE YOUR CATALOG

Need parts? Let your DoD catalogs guide you.

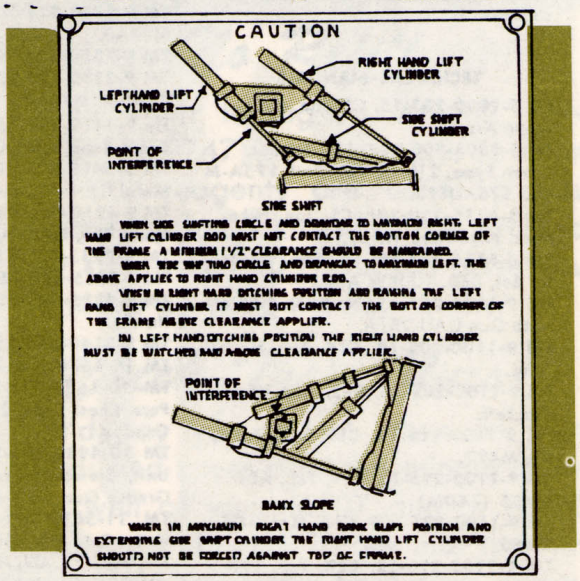


CYLINDER SAVER SECRET



Your Model 4D Huber-Warco motor grader may look like other graders, but it's not exactly like the others. There's a caution plate installed inside the cab to the right of operator's seat. It gives certain precautions which must be taken during operation so you won't damage the hydraulic lift cylinder on your equipment. The plate is easy to overlook, so make sure you find it.

These precautions apply only to your Huber-Warco grader so read 'em until you know 'em by heart.


CAUTION

SIDE SHIFT

WHEN SIDE SHIFTING CIRCLE AND DRAWBAR TO MAXIMUM RIGHT, LEFT HAND LIFT CYLINDER ROD MUST NOT CONTACT THE BOTTOM CORNER OF THE FRAME. A MINIMUM 1 1/2" CLEARANCE SHOULD BE MAINTAINED.

WHEN TIP THE TWO CIRCLE AND DRAWBAR TO MAXIMUM LEFT. THE ABOVE APPLIES TO RIGHT HAND CYLINDER ROD.

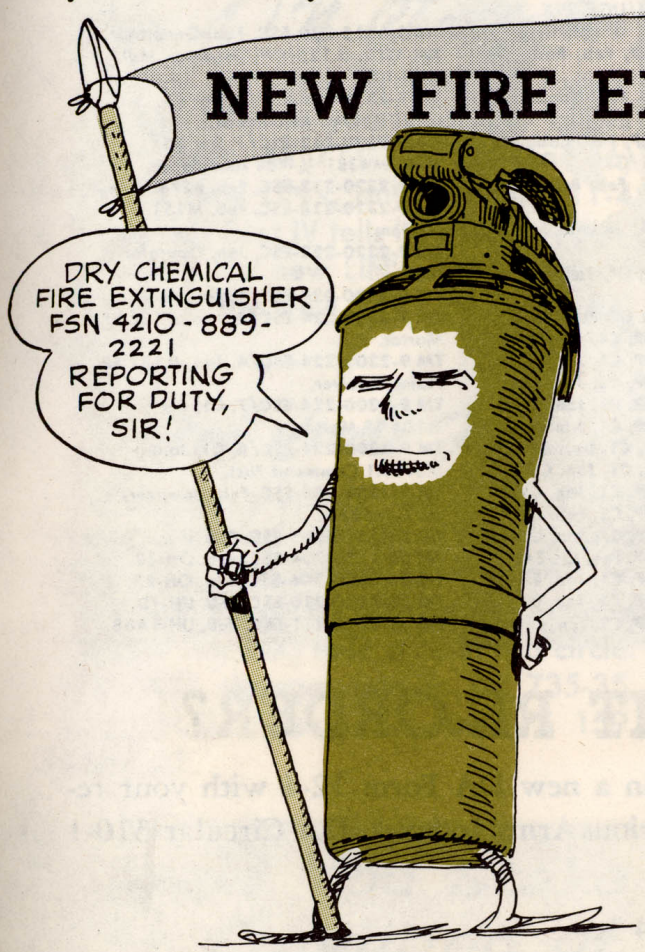
WHEN IN RIGHT HAND DITCHING POSITION AND RAISING THE LEFT HAND LIFT CYLINDER IT MUST NOT CONTACT THE BOTTOM CORNER OF THE FRAME ABOVE CLEARANCE APPLIES.

IN LEFT HAND DITCHING POSITION THE RIGHT HAND CYLINDER MUST BE WATCHED AND ABOVE CLEARANCE APPLIES.

BANK SLOPE

WHEN IN MAXIMUM RIGHT HAND BANK SLOPE POSITION AND EXTENDING SIDE SHIFT CYLINDER THE RIGHT HAND LIFT CYLINDER SHOULD NOT BE FORCED AGAINST TOP OF FRAME.

NEW FIRE EXTINGUISHER



There's no need to be burned up because your 2½-lb dry chemical fire extinguisher (FSN 4210-893-1092) loses its pressure and then can't be recharged.

Help's on the way! When those fire extinguishers become unserviceable, they'll be replaced by a 2½-lb hand type dry chemical fire extinguisher (FSN 4210-889-2221), Walter Kidde part number 874195 or equal.

That's not all . . . the new type extinguisher can be serviced by ordering a replacement cylinder (FSN 4210-889-2222).

The U.S. Army Mobility Equipment Center in St. Louis is the Army manager for the new items.

A selected list of recent publications of interest to Organizational Maintenance Personnel. This is a list compiled from recent Adjutant General's Distribution Center Bulletins. For complete details see DA Pam 310-4 with latest changes.

TECHNICAL MANUALS

TM 5-1090-203-15, C2, Jan, Metascope Assy.
TM 5-3805-200-20P, Jan, Loader, Scoop Type, 2½ Cu Yd, Clark 175A-M and 175A-M23.
TM 5-6115-230-20P, C1, Jan, Nike-Herc, Nike-Herc (Imp).
TM 5-6115-237-10, C1, Jan, Generator Set, DED, 100KW A/C.
TM 9-1005-265-15, Nov 65, 7.62MM Auto Gun GAU-2B/A.
TM 9-1100-200-12, C19, Feb, Honest John.
TM 9-1100-209-14, C12, Mar, Davy Crockett.
TM 9-1100-218-12, C19, Jan, Projectile M422.
TM 9-1100-225-12, C19, Feb, ADC XM55 (TADM).
TM 9-1100-225-20P, C10, Mar, ADC XM55.
TM 9-1100-226-12, C17, Feb, UFD XM41.
TM 9-1100-300-12, C20, Feb, Sergeant.
TM 9-1190-260-15, C3, Jan, Sergeant.
TM 9-1290-326-20P, Jan, Reproducer, Signal Data (MLU).
TM 9-1410-250-15P/1/2, Jan, Nike-Herc, Nike Herc (Imp).
TM 9-1410-375-15P/1/2, Jan, Pershing.
TM 9-1410-500-15P/2/1, Dec 65, Hawk.
TM 9-1430-250-15P/6/2, Jan, Nike-Herc (Imp).
TM 9-1430-250-15P/7/1, Nov, Nike-Herc (Imp).
TM 9-1430-250-15P/9/1, Dec 65, Nike-Herc (Imp).
TM 9-1430-250-15P/10/1, Dec 65, Nike-Herc (Imp).
TM 9-1430-253-12/5, Feb, Nike-Herc.
TM 9-1430-253-15P/2/2, Jan, Nike-Herc (Imp).
TM 9-1430-503-15P/1, Dec 65, Hawk.
TM 9-1430-511-12/2, Feb, Hawk.
TM 9-1430-511-15P/1, Jan, Hawk.
TM 9-1430-511-20, Feb, Hawk.
TM 9-1440-375-15P/2, Jan, Pershing.
TM 9-2320-213-20, C1, Feb, M274, M274A1 Mule.
TM 9-2320-218-20, C3, Jan, M151 Truck.
TM 9-2330-205-14, Jan, M200A1 2½-Ton Gen. Trailer Chassis.
TM 9-2350-210-12, C6, Feb, Howitzer, M55.
TM 9-2350-224-10, Jan, Operator, M48A3.
TM 9-2350-224-20, Jan, M48A3.
TM 9-2350-224-25P, Jan, Tank, Combat, M48A3.
TM 9-3419-226-15P, Feb, Shaper, South Bend Lathe CS-100.
TM 9-3419-227-10, Jan, Saw, Band, Metal Cutting, Do All Co 1612-OM.
TM 9-4910-462-10, Dec 65, A/C Spark Plug Cleaning Kit.
TM 9-4935-376-15P/2, Feb, Pershing.
TM 9-4935-500-15P/1, Nov 65, Hawk.
TM 9-4935-503-15P/1, C1, Feb, Hawk.
TM 9-8140-375-15P/2, Jan, Pershing.
TM 10-1670-206-23, C1, Jan, OV-1.
TM 10-1670-225-23, Jan, Parachute, Pers, Chest-Type, 28' Dia Nylon Canopy.
TM 10-4930-206-13, Feb, Lubricating Unit, Stewart-Warner 331400, Brown Grease Gun Co F-63-BC.
TM 11-5815-200-12, Feb, Teletypewriter Sets AN/FGC-20, AN/FGC-20X, AN/FGC-21, AN/FGC-64, AN/FGC-66, AN/FGC-67, AN/FGC-67X, AN/UGC-4, AN/UGC-29, AN/UGC-29X, Teleprinter TT-259/FG.
TM 11-5820-516-15P, Feb, Radio Set AN/GRC-66 (V3).
TM 11-5965-257-15, Feb, Handset H-138/U.
TM 11-5975-201-15P, Feb, Cabinet, Elec Equip CY-2554A/GT.
TM 11-6140-208-15, Feb, Battery, Storage BB-451/U.
TM 11-6665-221-15, Jan, Radiac Set AN/PDR-60.
TM 11-6675-200-10, C4, Jan, Theodolites.
TM 55-1510-201-10 CL, Feb, U-8.
TM 55-1510-201-20P, C4, Jan, U-8.
TM 55-1510-202-20P, C5, Jan, O-1A.
TM 55-1510-203-20P, C5, Jan, U-6.
TM 55-1510-204-20P, C1, Jan, OV-1.
TM 55-1510-205-20P, C1, Jan, U-1.
TM 55-1510-206-10, C1, Dec, CV-2.
TM 55-1510-206-20, C1, Jan, CV-2.
TM 55-1510-206-20P, C1, Jan, CV-2.
TM 55-1510-206-20P, C2, Feb, CV-2.
TM 55-1520-201-20P, C1, Jan, UH-19.
TM 55-1520-202-20P, Feb, CH-34.
TM 55-1520-203-20P, C1, Jan, CH-34.
TM 55-1520-203-20P, C2, Feb, CH-37.
TM 55-1520-204-20P, C2, Jan, OH-13.
TM 55-1520-205-20P, C1, Jan, CH-21.
TM 55-1520-206-20P, Jan, AH-23.
TM 55-1520-206-20P, C1, Jan, OH-23.
TM 55-1520-206-20 PMD, Dec, OH-23.
TM 55-1520-206-20 PMI, Dec, OH-23.
TM 55-1520-206-20 PMP, Dec, Oh-23.
TM 55-1520-209-20P, C1, Jan, CH-47.
TM 55-1520-210-10 CL, Jan, UH-1D.
TM 55-1520-210-20P, Feb, UH-1.
TM 55-1520-210-20P, C2, Jan, UH-1D.

MODIFICATION WORK ORDERS

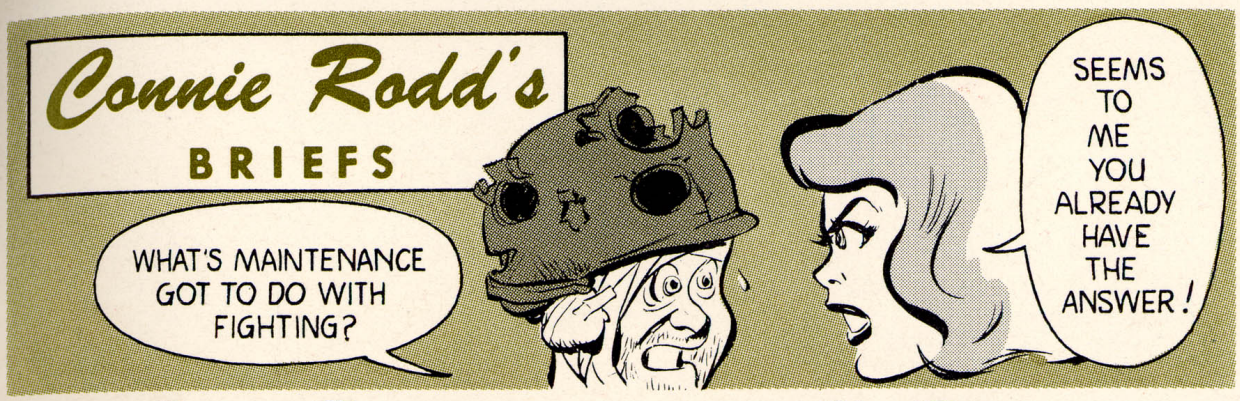
MWO 55-1510-204-34/37, Feb, OV-1. (Normal)
MWO 55-1510-206-30/4, Feb, CV-2. (Normal)
MWO 55-1510-206-30/5, Feb, OV-1. (Normal)
MWO 55-1510-206-34/65, Feb, CV-2. (Normal)
MWO 55-1510-206-34/68, Feb, OV-1. (Normal)
MWO 55-1520-209-30/1, Feb, CH-47. (Normal)
MWO 55-1520-209-30/14, Feb, CH-47. (Normal)
MWO 55-1520-211-34/33, C1, Feb, UH-1B. (Normal)

Here's the latest list of available Equipment Serviceability Criteria TM's. Check it out—if you need any—get the word to your Pubs section for prompt action.

TM 5-6115-330-ESC, Feb, Generator Set, GED, 0.125-KW, Jacobsen Mdl UGP-12.
TM 9-2320-208-ESC/3, Dec 65, M170 ¼-Ton Ambulance.
TM 9-2320-212-ESC/1, Dec 65, M43, M43B1 ¾-Ton Ambulance.
TM 9-2320-213-ESC, Feb, B274 Mule.
TM 9-2320-218-ESC, Feb, M151 ¼-Ton.
TM 9-2320-222-ESC, Jan, Operator, M88.
TM 9-2300-224-ESC/1, Jan, M113.
TM 9-2300-224-ESC/2, Jan, M106 SP Mortar.
TM 9-2300-224-ESC/4, Jan, M132 SP Flame Thrower.
TM 9-2300-224-ESC/7, C1, Jan, M106 SP Mortar.
TM 9-2300-224-ESC/8, C1, Jan, M577A1 Command Post.
TM 9-2350-209-ESC, Feb, Howitzer, M52, M52A1.
TM 55-1510-203-ESC, Feb, U-6.
TM 55-1520-204-ESC, Feb, OH-13.
TM-55-1520-206-ESC, Jan, OH-23.
TM 55-1520-210-ESC, Feb, UH-1D.
TM 55-1520-211-ESC, Feb, UH-1A&B.

DID YOUR UNIT RE-ORDER?

If your outfit has not done so, shoot in a new DA Form 12-4 with your reorder on it for PS Magazine and the various Army Indexes. DA Circular 310-1 (7 Jan 66) gave the word.



Erase Raritan

It's a good idea to mentally erase the info in your older technical pubs which says to send DA Form 2028 to Raritan Arsenal. Just take a look at Appendix III of TM 38-750 to match up the manual's subject with a category listed. Next, turn to Appendix II and get the address for that category. Send the 2028 to that address. You send the 2028's on general type pubs to: Commanding Officer, Letterkenny Army Depot, ATTN: SSMLE-NP, Chambersburg, Pa. 17201.

New L/N Changeover

You've got until 30 June 66 to update the LIN's in your property books and records. AR 711-140 (31 Mar 66) lists the new LIN's, and DA Cir 711-4 (8 Mar 66) Sect IV tells how to start converting to the new LIN's. There was an article on the new LIN's on page 61, PS 157.

Red Circle Flag

Flagging property book pages has been up-dated by DA TWX 755698 (DCSLOG/C4), dated 18 Mar 66. The TWX says pages for all reportable items (both X and NX) take a ¼-in red circle. The TWX changes info in AR 735-35, para 3-2i(1), page 3-3, and PS 159, page 45.

No Refill

The water testing kit, AN-M2, (FSN 6665-171-9747) is expendable. So when the kit's reagents are used up you needn't try for a kit refill. Just order a new kit. TB Cml 40 (9 Jul 62) gives you the scoop on using the kit.

Check These Nuts!

It'd pay you to get down on your hands and knees right this minute in the gun well of your M107 gun or M110 howitzer and check to see that the two nuts on the traversing final drive assembly are tight—and their washer tabs are bent into the slots on the nuts. If the nuts are loose—or at least one tab's not bent in—don't you tighten 'em or bend 'em. Get support to do it soonest. But act fast—or the nuts'll work loose from vibration and gun firing . . . the housing (now a supply item . . . FSN 2520-930-0246 . . . P/N 10892426) will break . . . and there goes your steady firing platform.

Empire is Holley

There're only 2 authorized carburetors for your M151 ¼-ton — the Holley and the Zenith makes. But . . . you may see the name Empire on the top of the Holley carburetor. That's the name of the manufacturer of the Holley carburetor casting only.

Would You Stake Your Life *right now* on the Condition of Your Equipment?

YOUR OUTFIT, TOO, CAN GET ITS PUBS DIRECT

6. Who May Establish an Account. All elements of the Department of the Army down to and including company/battery/detachment level are authorized to establish a publications account.

—DA PAM 310-10

No outfit is too small to have a pin-point publications account. All you need is an OK from your battalion-level HQ.